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South Dakota State College of Agriculture and Mechanic Arts: Annual Catalog 1914-1915 with Announcements for the Year 1915-1916

South Dakota State College of Agriculture and Mechanic Arts

Vol. VII April, 1915 No. IV

SOUTH DAKOTA
State College of Agriculture and Mechanic Arts

BULLETIN

ANNUAL CATALOG, 1914-1915
with Announcements for the Year 1915-1916

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Brookings, S. D.

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Statement of the Ownership, Management, Circulation, Etc.

of South Dakota State College of Agriculture and Mechanic Arts Bulletin published quarterly at Brookings, South Dakota, required by the Act of August 24, 1912.

Name of — Post Office Address.

Editor, G. L. Brown, Dean of College.....Brookings, South Dakota

Publisher, South Dakota State College of Agriculture and Mechanic Arts.....Brookings, South Dakota

Owners, South Dakota State College of Agriculture and Mechanic Arts.....Brookings, South Dakota

Known bondholders, mortgagees, and other security holders, holding 1 per cent or more of total amount of bonds, mortgages, or other securities: None.

ELLWOOD C. PERISHO,
President of College.

Sworn to and subscribed before me this 10th day of March, 1915.

R. A. LARSON,
Notary Public.

(Seal)

(My commission expires June 5, 1917.)

Calendar of 1915-16

FIRST SEMESTER

1915.

June 7-July 16—Six weeks Summer School.

September 20-21—Entrance examinations and registration.

September 22—Work of first semester begins at 8 o'clock a. m.

November 1—Last day for announcing subjects of theses.

November 1—School of Agriculture opens.

November 25-26—Thanksgiving recess.

December 22—Christmas vacation begins at 4:15 p. m.

1916.

January 4—Christmas vacation ends at 8:00 a. m.

January 31-February 4—Examination week.

SECOND SEMESTER

February 8—Second semester begins at 8:00 a. m.

March 23—School of Agriculture closes.

May 22—Senior vacation begins.

May 29-June 2—Examination week.

June 4—Baccalaureate Sunday.

June 7—Commencement exercises at 10:30 a. m.

Calendar of Short Courses

December 13-17—One week course for cream testers.

January 4-June 2—Course in traction engineering.

January 4-March 24—Three months creamery course.

December 27-January 1—Farm and home course.

Regents of Education

Hon. Albert M. Anderson.....Sturgis
Hon. T. W. Dwight.....Sioux Falls
Hon. August Frieberg .....Beresford
Hon. Frank Anderson.....Webster
Hon. J. W. Campbell.....Huron

Officers of the Board

Hon. T. W. Dwight.....President
Hon. I. D. Aldrich .....Secretary
Hon. A. W. Ewert (State Treasurer).....Treasurer

Regents' Committee for the College

Hon. T. W. Dwight Hon. J. W. Campbell

*Faculty

ELLWOOD CHAPPELL PERISHO, A. M., M. S., LL. D., President.

B. S., Earlham College, 1887; A. M., Earlham College, 1889; Professor of Mathematics, Guilford College, North Carolina, 1888-1892; scholar, University of Chicago, 1893-1894; fellow, 1894-1895; M. S., University of Chicago, 1895; Professor of Geology, State School, Platteville, Wis., 1895-1903; Professor of Geology, University of South Dakota, and State Geologist, 1903-1914; Dean, College of Arts and Sciences, University of South Dakota, 1907-1914; present position since August, 1914.

JAMES HENRY SHEPARD, B. S., Professor of Chemistry.

B. S., University of Michigan, 1875; post-graduate student in University of Michigan, 1881-1882; High School Instructor in Natural Sciences, Ypsilanti, Michigan, 1882-1886; present position since 1888.

HALVOR CHRISTIAN SOLBERG, M. E., Professor of Mechanical and Steam Engineering.

B. S., South Dakota Agricultural College, 1891; B. M. E., Purdue University, 1895; M. E., Purdue University, 1896; Professor of Practical Mechanics, South Dakota Agricultural College, 1891-1896; present position since 1896.

NIELS EBBESEN HANSEN, M. S., Professor of Horticulture and Forestry.

B. S., Iowa Agricultural College, 1887; M. S. Iowa Agricultural College, 1894; Commercial Iowa Nurseries, Atlantic and Des Moines, 1888-1891; Assistant Professor in Horticulture, Iowa Agricultural College, 1891-1895; studied in Europe, 1894; Agricultural Explorer for U. S. Department of Agriculture to Europe and Asia, 1897-1898 and 1906-1907; to Siberia, Turkestan and Algiers, 1908-1909; for South Dakota, to Siberia, 1913; present position since 1895.

HUBERT BERTON MATHEWS, M. S., Professor of Physics.

B. S., South Dakota Agricultural College, 1892; M. S., South Dakota Agricultural College, 1899; pursued special work at various times in the Universities of Michigan, Wisconsin and Nebraska; Superintendent of City Schools, Clark, S. D., 1892-1893; Assistant in Chemistry and Physics, South Dakota Agricultural College, 1896-1899; Professor of Physics and Electrical Engineering, 1899-1909; Vice-President, 1904-1906; present position since 1909.

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*With the exception of the president, the names occur in the order of appointment.

BOWER THOMAS WHITEHEAD, M. S., Ph. C., Professor of Pharmacy.

Ph. G., South Dakota Agricultural College, 1895; Ph. C., Northwestern University, 1896; B. S., South Dakota Agricultural College, 1897; M. S., South Dakota Agricultural College, 1901; Instructor in Pharmacy, South Dakota Agricultural College, 1895; present position since 1896.

GEORGE LINCOLN BROWN, Ph. D., Dean, Vice-President, and Professor of Mathematics.

B. S., University of Missouri, 1892; Teaching Fellow in Mathematics, 1892-1893; M. S., 1893; Fellow in Mathematics, University of Chicago, 1894-1896; Ph. D., University of Chicago, 1900; Professor of Mathematics, South Dakota Agricultural College, 1897-1910; Acting President South Dakota State College, summer and fall of 1908; Dean of the faculty, 1910; Vice-President, 1913; Acting President, February 1 to August 1, 1914; present position since August 1, 1914.

ADA BERTHA CALDWELL, Professor of Industrial Art.

Student Art Institute of Chicago, 1893-1897; Instructor in Art, Yankton College, 1897-1899; student Teachers' College, N. Y., and Chase School of Art, N. Y., 1903-1904; student summer course Handicraft Guild, Minneapolis, 1905, 1906 and 1907; student Commonwealth Art School, Maine, during summer, 1910; present position since 1899.

ALBERT SPENCER HARDING, A. M., Professor of History and Political Science.

B. S., South Dakota Agricultural College, 1892; Fellow in American History, University of Nebraska, 1896-1897; A. M., University of Nebraska, 1897; Assistant in History and Civics, South Dakota Agricultural College, 1897-1900; student, University of Wisconsin, 1898, and summer session, 1907; Instructor in American History, University of Nebraska, summer session, 1909; present position since 1901.

ROBERT BLACKWOOD FORSEE, Pe. P., Principal of Preparatory Department.

Principal of Pedagogy, Western College, Missouri, 1888; Principal of Schools at Elgin, Mo., 1889-1891; at Steffenville, 1892-1893; at Estelline, South Dakota, 1895-1896; County Superintendent of Schools, Hamlin County, South Dakota, 1896-1900; present position since 1901.

JAMES WILBUR WILSON, M. S. A., Director of the Experiment Station and Professor of Animal Husbandry.

B. S. A., Iowa Agricultural College, 1896; M. S. A., Iowa Agricultural College, 1898; Assistant in Agriculture, Iowa Agricultural College, 1896-1897; Private Secretary to Secretary of Agriculture, 1897-1900; present position since 1902.

WILLIAM HOWARD POWERS, A. B., A. M., Librarian and Associate Professor of English.

A. B., Miami University, 1891; A. M., Harvard University, 1899; student in the Graduate School, Harvard, 1899-1901; Instructor in Mathematics, Ohio Normal University, 1888-1889; Master of the High School, Harwich, Massachusetts, 1892-1895; Head of the Department of English, High School, Pawtucket, Rhode Island, 1895-1898; Professor of English, Huron College, 1901-1905; member State Library Commission, 1913——; present position since 1905.

CHRISTIAN LARSEN, M. S. A., Professor of Dairy Husbandry.

B. S. A., Iowa State College, 1902; M. S. A., Iowa State College, 1904; studied European dairying, 1900; Dairy Instructor, Massachusetts Agricultural College, 1901; Assistant and Associate Professor of Dairying, Iowa State College, 1902-1906; Professor of Dairy Husbandry, Utah Agricultural College, 1907; present position since 1907.

MADISON CLAIR BATES, A. M., Professor of English.

A. B., Williams College, 1904; A. M., Williams College, 1905; A. M., Harvard University, 1906; Instructor in English, University of Illinois, 1906-1907; Scholar in English, Graduate School, Columbia University, 1909-1910; present position since 1907.

BYRON BRIGGS BRACKETT, A. M., Ph. D., Professor of Electrical Engineering.

A. B., Syracuse University, 1890; A. M., Syracuse University, 1893; Certificate of Proficiency in Electrical Engineering, Johns Hopkins University, 1895; Ph. D., Johns Hopkins University, 1897; Teacher of Mathematics, Dickinson Seminary, Williamsport, Pa., 1890-1892; Teacher of Higher Mathematics and Mechanical Drawing, Collegiate Department of Adelphi Academy, Brooklyn, N. Y., 1892-1893; student-instructor, Electrical Engineering Department of Johns Hopkins University, 1894-1897; Instructor in Electrical Engineering, Union College, 1897-1898; Teacher of Physics, Eastern High School, Washington, D. C., 1898-1900; Instructor in Electrical Science, Rutgers College, 1901-1903; Professor of Physics and Elec-

trical Engineering, Clarkson School of Technology, 1903-1908; Professor of Electrical Engineering, Clarkson School of Technology, 1908-1909; Inspector of Torpedo Cable for U. S. Army, summer of 1898; Electrical Engineer for Rowland Telegraphic Company, Baltimore, Md., 1900-1901; present position since 1909.

NOLA K. FROMME, B. S., Assistant Principal, School of Agriculture.

B. S. in Domestic Science, Ohio State University, 1905; Instructor in Home Economics, South Dakota State College of Agriculture and Mechanic Arts, 1907-1909; present position since 1909.

HARRY C. SEVERIN, B. A., M. A., Professor of Entomology and Nature Study.

B. A., University of Wisconsin, 1906; M. A., Ohio University, 1908; Fellow in Zoology and Entomology, Ohio State University, 1908-1909; Assistant to State Entomologist, Illinois, summer of 1909; present position since 1909.

ROBERTSON COOK, M. E., Professor of Experimental Engineering.

M. E., University of Minnesota, 1902; Assistant Instructor in Mechanical Engineering, University of Minnesota, 1903; engineer with Oliver Iron Mining Company, Duluth, Minnesota, 1904; Mechanical Engineer for the Western Lime and Cement Company, Milwaukee, Wisconsin, 1904-1908; Instructor in Mechanical and Steam Engineering, 1908-1910; Member A. S. M. E. since 1914; present position since 1910.

SHIRLEY PUTNAM MILLER, B. S., M. A., Professor of Zoology.

B. S., South Dakota State College, 1903; M. A., University of Minnesota, 1905; student at Minnesota Sea-side Laboratory, Vancouver Island, 1902-1904; Instructor in Zoology, South Dakota State College, 1905-1908; student at the Anatomical-Biological Institute, Berlin, and the University of Munich, 1908-1910; investigator in Russian Zoological Laboratory, Villafranche, on the Mediterranean; present position since 1910.

GEORGE ARTHUR STARRING, A. B., Agricultural Editor.

A. B., Huron College, 1907; graduate Huron Business College; student Rochester Seminary, N. Y., 1907-1908; of University of Chicago, 1908-1909; summer quarter, University of Chicago, 1909; Instructor in Commerce and Economics, Sioux City High School, 1909-1910; Professor of Commerce, South Dakota State College, 1910; present position since 1911.

ALBERT NASH HUME, B. S. A., M. S., Ph. D., Professor of Agronomy.

B. S. A., Purdue University, 1900; M. S., Purdue University, 1902; Live Stock Husbandman, North Louisiana Experiment Station; Instructor in Agriculture, Wenona Agricultural Institute, 1903; Instructor, Associate, Assistant Professor of Crop Production, University of Illinois and Agricultural Experiment Station, 1904-1911; student Leipzig, Germany, winter semester, 1908-1909; student Goettingen, Germany, summer semester, 1909 to winter semester, 1910; Ph. D., Goettingen, December, 1910; present position since 1911.

JOSEPH GLADDEN HUTTON, B. S., M. S., Associate Professor of Agronomy.

Graduate of Indiana State Normal School, Terre Haute, 1899; S. B., University of Chicago, 1908; M. S., University of Illinois, 1910; Teacher in Indiana District Schools, 1891-1895; Assistant in Biological Laboratory, Indiana State Normal School, 1898-1899; Instructor in Physiology, Indiana State Normal School, 1899-1900; Curator's Assistant, Marine Biological Laboratory, Wood's Hole, Mass., summer, 1901; Principal of Beardstown (Ill.) High School, 1901-1903; Superintendent of Schools, Beardstown (Ill.), 1903-1908; Instructor in Psychology, Indiana State Normal School, summer, 1908; Assistant in Geology and Graduate School in Botany, Geology and Soils, University of Illinois, 1908-1911; Field Assistant, Illinois State Geological Survey, summer, 1909; present position since 1911.

GARNETT HEDGE, Mus. Bac., Professor of Music.

Graduated from Des Moines Musical College, Des Moines, Iowa, 1894; post-graduate in same institution, 1896; studied with Karleton Hackett, American Conservatory, Chicago, 1897-1898; taught in American Conservatory, sang with Castle Square Opera Co., and studied with Arthur Beresford, 1898-1899; taught at Heading College, Abingdon, Ill., 1899-1900; Supervisor of Public School Music, Lead and Deadwood (S. D.) schools, 1900-1901; traveled with Minneapolis Symphony Orchestra, 1908-09-10 and with Thomas Orchestra, February, 1910; studied summer 1909, with Madame Friedenburg, New York; Dean of Huron College School of Music, Huron, S. D., 1910-1912; present position since 1912.

BENJAMIN LEE THOMPSON, B. Sc., Associate Professor of Animal Husbandry.

B. Sc. in Agriculture, Ohio State University, 1908; Professor of Animal Husbandry and Dairying, Dunn County School of Agriculture, Menominee, Wis., 1908-1909; Instructor in Animal Husbandry, South Dakota State College, 1909-1912; present position since 1912.

B. A. DUNBAR, Associate Professor of Chemistry.

A. B., Ohio Wesleyan University, 1891; A. M., Ohio Wesleyan University, 1892; Instructor in Mathematics and Physics, Hillsboro Normal College, Hillsboro, Ohio, 1891-1893; Instructor in Physics, High School, Ironton, Ohio, 1893-1895; Supt. of Schools, Michigan, Wyoming, Minnesota and North Dakota, 1895-1910; student in Chemistry, University of Chicago, 1909-1910; Assistant Professor of Chemistry, South Dakota State College, 1911-1912; present position since 1912.

CHRISTY WILLIAM MICHEL, A. M., Professor of Botany.

A. B., Litt. B., Ohio Wesleyan University, 1904; A. M., Harvard University, 1912; elected Austin Scholar in Botany, Graduate School, Harvard University, 1911, and Scholar in Yale University, for the same year; received appointment as assistant in Botany, Harvard University, 1912, and Fellow in Botany in the University of Wisconsin; student Harvard University, second semester of 1905-06 and the year of 1911-12; Ohio State University, 1908-09; Supt. of Schools, Mercer, Ohio, 1904-05; Prof. Biology, Defiance College, 1906-1908 and 1909-1911; present position since 1912.

HARRY W. EWING, Professor of Physical Education.

Student University of Nebraska, Academic Courses, 1904-1907; Assistant Coach, University of Nebraska, 1910-1911; Director of Athletics, Morningside College, 1911-1912; present position since 1912.

***JOHN M. FULLER, B. S., Associate Professor of Dairy Husbandry.**

B. S. in dairying, Iowa State College, 1911; Associate Editor, Orange Judd Weeklies, 1911-1912; Instructor in Dairy Husbandry 1912-1913; present position since 1913.

BERTRAM EVERETT McPROUD, A. B., A. M., Professor of Education.

A. B., Baker University, 1900; Supt. of Schools, Oskaloosa, Kansas, 1900; Supt. City Schools, North Bend, Nebraska, 1902; A. M., Baker University, 1904; Professor of Latin, University of Puget Sound, 1904; Vice President and Professor of Latin and Pedagogy, University of Puget Sound, 1905; Instructor and Principal of the Academy, Baker University, 1907; Graduate Student in Education and Psychology, University of Chicago, summer quarter 1908; also year of 1908-09; Dean of Teachers' College and Professor of Education Nebraska Wesleyan University, 1909; present position since 1913.

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*Resigned April 1, 1915.

ALBERT JONES WILLIS, C. E., Professor of Civil Engineering.

C. E., Lehigh University, 1905; Asst. Engineer of Construction and Repair, Bethlehem Steel Co., 1905-1906; Instructor in Civil Engineering, Lehigh University, 1906-1908; Instructor in Civil Engineering, Armour Institute of Technology, 1908-1910; Structural Draftsman with C. M. & St. P. R. R., summer of 1909; Structural Steel Draftsman and Checker with the Guerber Engineering Co., summers of 1910, 1911, 1912, 1914; Instructor in Civil Engineering, Cooper Union, New York City, 1910-1913; in charge of property survey and laying out of public roads in Cambria County, Pa., summer of 1913; Assoc. M. Am. Soc. C. E.; present position since 1913.

BELLA SPENCER, A. B., Professor of Modern Languages.

A. B., Kansas State Univ., 1899; Student of Prof. Heine, Univ. Goettingen, Germany, 1898-1899; Student of Prof. Schweizer-Siedler and Dr. Tobler, Univ. of Zurich, Zurich, Switzerland, 1899-1904; Instructor in Modern Language, City High School, Portland, Oregon, 1904-1905; Instructor in Modern Language, LaSalle-Peru Township High School, LaSalle, Ill.; present position since 1913.

CHARLES CLINTON LIPP, D. V. M., Professor of Veterinary Medicine.

Student Poland Union Seminary, North Eastern Ohio Normal College; D. V. M., Ohio State University, College of Veterinary Medicine; present position since 1913.

ERNEST D. STIVERS, B. S., Professor Secondary Agricultural Education; Director of Summer School.

B. S., Iowa State College, 1901; Science Teacher, High School, Mason City, Ia., 1901-1904; Superintendent of Schools, Parker, S. D., 1904-1910; student special work in Agriculture, Iowa State College, 1910-1911; Principal of Agricultural High School, Prescott, Arkansas, 1911-1912; Agricultural Editor, International Correspondence Schools, Scranton, Pa., 1912-1913; present position since 1913.

CHAS. F. SCHLATTER, B. S., Professor of Commercial Science.

B. S., Southern Iowa Normal, 1902; Instructor in Mathematics, Southern Iowa Normal, 1904-1905; Instructor in Pedagogy, Southern Iowa Normal, summer quarter, 1905; graduate Gem City Business College, 1906; student Drake University, summer quarters, 1909 and 1910; Superintendent of Schools, Dunlap, Illinois, 1906-1907, 1907-1908, and 1908-1909; Instructor in Commerce, Sioux City High School, 1909-1910; Principal Department of Commerce, La Salle-Peru Township High School, La Salle, Illinois, 1910-1911; present position since 1911.

FRANK EMERSON BROWN, A. M., Professor of Public Speaking.

A. B., Knox College, 1902; A. M., Knox College, 1908; Illinois Representative Interstate Oratorical Contest, St. Paul, 1902; student, Emerson College of Oratory, Boston, 1902-1903; student, University of Chicago, Summer School, 1908; Instructor in English and Oratory, Mercersburg Academy, Mercersburg, Pennsylvania, 1903-1905; Professor of Public Speaking, Drake University, 1905-1914; present position since 1914.

VEY VALENTINE, B. S., Assistant in Hog Cholera Demonstration Work.

B. S., South Dakota State College, 1914; Assistant in hog cholera demonstration work of College in cooperation with U. S. Dept. of Agriculture in Davison county since 1914.

Instructors and Assistants

HOWARD H. HOY, B. S., M. S., Assistant Professor of Physics and Electrical Engineering.

B. S., South Dakota Agricultural College, 1896; M. S., South Dakota Agricultural College, 1903; pursued special work in electrical engineering in the Universities of Nebraska and Wisconsin; Instructor in Mechanical and Electrical Engineering, South Dakota Agricultural College, 1899-1904; present position since 1904.

MAUD GODDARD, Assistant Professor of Industrial Art.

Student Art Institute, Chicago, 1903; student Summer Course, School of Fine Arts, Minneapolis, 1907; student Chautauqua summer school, N. Y., 1909; student Commonwealth Art School, Maine, summer of 1910; present position since 1903.

CARL CHRISTENSEN, Assistant Professor of Music, Violin and Other Instruments.

Student under Professor Christian Madsen of Copenhagen, Denmark; also studied with C. F. Toenniges, of Davenport, Iowa, 1900-1901; with Alfred Speil, Minneapolis, 1908-1909; and with William McPhail, Minneapolis, summer of 1912; present position since 1906.

W. ALBERT PETERSON, Mus. Bac., Assistant Professor of Music.

Qualified as teacher, Illinois Wesleyan Conservatory, 1901; graduate American Conservatory, Chicago, 1909; post-graduate same institution, 1911; pupil of Allen Spencer, pianist, and Adolph Weidig and Geo. Colburn, harmony, counter-point, composition, etc.; Instructor, Huron College, Huron, S. D., 1911-1912; present position since 1912.

GERTRUDE S. YOUNG, A. B., Assistant Professor of English and History.

A. B., University of Wisconsin, 1906; present position since 1907.

CLIFFORD N. MILLS, B. S., Assistant Professor of Mathematics.

B. S., Franklin College, Indiana, 1910; Graduate Student Indiana University, summers 1910-12; Fellow, Indiana University, 1913-14; Completed work for A. M. Degree January, 1914; Teacher Public School Jennings Co., Indiana, 1904-05; Instructor Math. Franklin H. S., Indiana, 1908-10; Tutor Math. Franklin College, Indiana, 1908; Prof. of Math. Highland College, Kansas, 1910-13; present position since February 3, 1914.

JOHN A. BONELL, Instructor in Shopwork.

Student Stout Institute, 1904, and State Normal School, Oshkosh, Wis., summer 1905; Assistant and Instructor in Farm Mechanics, Marathon County School of Agriculture, Wausau, Wis., 1905-1910; attended Stout Institute, summer 1910; present position since 1910.

HOWARD LOOMIS, A. B., Assistant in Agronomy.

A. B., Albion College, 1909; Instructor Chemistry and Physics, Union City, Ind., High School, 1909-1910; present position since 1910.

GUY E. YOUNGBERG, B. S., M. S., Assistant in Chemistry.

B. S., 1906; Ph. G., 1908, and M. S., 1909, South Dakota State College; present position since 1910.

MANLEY CHAMPLIN, B. S., Assistant Professor in Agronomy.

B. S., South Dakota State College, 1909; Special Agent, 1909, Scientific Assistant, 1910, Collaborator, 1911, United States Department of Agriculture; present position since July, 1911.

HOWARD W. GREGORY, B. S., Assistant in Dairy Husbandry.

B. S. in Dairying, Oklahoma Agricultural and Mechanical College, 1912; present position since 1912.

GEORGE PHILLIPS, Student Adviser.

B. S., South Dakota State College, 1909; Scholar in University of Wisconsin, 1910-1911; Instructor in Mechanical Engineering, South Dakota State College, 1912-1914; present position since 1914.

MABEL TROOIEN, B. S., Instructor in Mathematics.

B. S., South Dakota State College, 1907; present position since 1913.

LAURA FERGUSON, Instructor in Music.

Studied four years with Robert Boice Carson, of Chicago; Graduate of Carson School of Music, Portland, Oregon, 1911; Solo Soprano White Temple Baptist Church, Portland, 1910; Solo Soprano Grace M. E. Church, Portland, 1911-12; Taught privately in Minneapolis, 1912-13; Soprano Soloist, Westminster Presbyterian Church, Minneapolis, 1912-13; present position since 1913.

RUTH ALINE WOOD, B. S., Instructor in Home Economics.

B. S., South Dakota State College, 1913; present position since 1913.

NELLIE G. KENDALL, B. S., Instructor in English.

B. S., South Dakota State College, 1908; present position since 1912.

GRACE A. REVELL, B. S., Instructor in Mathematics.

B. S., South Dakota State College, 1912; postgraduate student, South Dakota State College, 1912-1913; present position since 1913.

EDWARD BINNEWIES, B. S., Assistant in Chemistry.

B. S., South Dakota State College, 1913; present position since 1913.

MATTHEW FOWLDS, B. S., Assistant in Agronomy.

B. S., South Dakota State College, 1913; Assistant in Entomology, South Dakota State College, 1913-1914; present position since March, 1914.

HENRY M. SHEA, Assistant in Chemistry.

Ph. G., 1911; B. S., 1913, South Dakota State College; present position since 1913.

SAMUEL L. SLOAN, B. S., Assistant in Agronomy.

Student assistant in Soils Laboratory, South Dakota State College, 1912-1914; B. S., South Dakota State College, 1914; present position since 1914.

CECILE IRENE WELCH, Instructor in Music.

Graduate of Music Department S. D. S. C., 1908; B. S. Degree S. D. S. C., 1910; Instructor in Piano, S. D. S. C., 1911-1912; studied piano and pipe organ at New England Conservatory, Boston, Massachusetts, 1912-1913; present position since 1914.

PERRY CLIFFORD, B. S., Assistant in Dairy Husbandry.

B. S., South Dakota State College, 1914; present position since 1914.

GRACE V. SOMERS, B. S., Instructor in Home Economics.

B. S., South Dakota State College, 1913; present position since 1913.

EDWIN H. HUNGERFORD, B. S., Assistant in Dairy Husbandry.

B. S., Kansas State Agricultural College, 1912; graduate student, 1912-1913, and Fellow in Chemistry, 1913-1914 in same institution; present position since 1914.

DAVID B. STEFFINS, Instructor in Mechanical Engineering.

Student State Normal School, Winona, Minnesota, 1912-1913; graduate of the Stout Institute, 1914; student University of Wisconsin, summer 1914; present position since 1914.

GENEVIEVE HARTGERING, B. A., Instructor in Home Economics.

B. A., University of Minnesota, 1911; student Teachers' College, Columbia University, 1914; Special Domestic Art Teacher in Minneapolis Public School, 1913-1914; Instructor in Millinery in Evening Schools, Minneapolis, 1913-1914; Instructor in Domestic Art in Vacation Schools, Minneapolis, 1914; present position since 1914.

JEANETTE M. PRUSIA, B. S., Instructor in Home Economics.

B. S., Iowa State College, 1899; B. S. in Home Economics, Iowa State College, 1914; Science Teacher, Ames High School, 1900; Substitute Teacher, Public Schools, Tacoma, Washington, 1912-1913; year of post-graduate work in Home Economics, Iowa State College, 1914; Extension lecturer and instructor in Home Economics, Iowa State College, 1914; present position since September, 1914.

GEORGE GILBERTSON, B. S., Assistant in Entomology.

B. S., South Dakota State College, 1914; present position since 1914.

HELEN FERGUSON, Assistant in Music.

Graduate in Public School Music, McAlester College, 1914; present position since 1914.

WILSON CRAMER, JR., Instructor in Animal Husbandry.

Present position since 1914.

DILLA E. WIMPLE, B. A., M. A., Instructor in German.

B. A., University of South Dakota, 1904; M. A., University of South Dakota, 1906; student at Berlitz School of Modern Languages, Chicago, summer session 1904; Instructor in German, University of

South Dakota, 1904-1907; Teacher of rural schools, 1908-1909; Principal of High School, Harrisburg, S. D., 1909-10; County Superintendent of Schools, Lincoln County, S. D., 1911-1914; present position since 1914.

CHARLOTTE ELLIOTT, B. A., M. A., Instructor in Botany.

B. A., Leland Stanford Junior University, 1907; Assistant in High School, Flandreau, S. D., 1907-1908; Instructor in Biology and Geography, State Normal School, Spearfish, S. D., 1908-1912; post-graduate work Leland Stanford Junior University, 1912-1913; M. A., 1913.

WILLIAM MONROE MAIR, Superintendent of Boys' and Girls' Clubs.

Studied three years in Oberlin College and Theological Seminary; traveled in Europe one year; Principal of the Public Schools of Garretson two and a half years; County Superintendent of Schools in Minnehaha County, four years; present position since 1913.

R. C. DITTO, Second Lieutenant 20th Infantry, U. S. Army, Professor of Military Science and Tactics.

Mercersburg Academy, 1903; post graduate, 1904; Lafayette College, 1904-1905; Army, 1907——; Philippine Islands, 1910-1912; present position since 1914.

WARD A. OSTRANDER, B. S., M. S., District Agricultural Agent.

B. S., Lawrence College, 1911; M. S., University of Wisconsin, 1914; present position since 1914.

GUY MORRISON, B. S., District Agricultural Agent.

B. S., South Dakota State College; present position since 1914.

C. A. MICHELS, B. S., M. S., District Agricultural Agent.

B. S., North Dakota Agricultural College, 1909; M. S., University of Wisconsin, 1912; present position since 1914.

VERNA M. KELLAR, Demonstrator in Home Economics.

Present position since 1914.

In addition to the regular members of the faculty, the following persons have given special lectures and addresses before the students and faculty of the State College during the year:

Hon. T. W. Dwight Sioux Falls.
Mrs. Cooper, Boston, Mass.
Dr. M. J. Exner, New York, N. Y.
Hon. Philo Hall, Brookings.
Hon. C. L. Dotson, Sioux Falls.
Hon. J. W. Parmley, Ipswich.
Hon. W. C. Allen, Aberdeen.
Dr. T. H. Coole, China.
Hon. Frank Byrne, Pierre.
Hon. Peter Norbeck, Redfield.
Hon. W. A. Ronald, Mitchell.
Secretary J. L. Childs, Kankakee, Ill.
Judge Alva E. Taylor, Huron.
Hon. George Farrell, Washington, D. C.
Hon. Victor Murdock, Wichita, Kan.
Hon. E. M. Sherman, Sioux Falls.
Hon. F. A. Spafford, Flandreau.
Dr. Craig S. Thoms, Moline, Ill.
Prof. Stephen Van Benthuysen, Mitchell.
Hon. E. C. Issenhuth, Redfield.
Hon. Peter Zollman, Mitchell.
Hon. P. R. Crothers, Badger.
Hon. A. J. Wimple, Beresford.
Hon. John Nicol, Wetonka.
Prof. Fred W. Merrill, Fargo, N. D.
Dr. O. O. Smith, Pierre.
Dr. John C. Whitten, University of Missouri.

The above list does not include the speakers upon the regular Y. M. C. A. lecture course.

Other Officers and Employees

R. A. Larson.....Secretary
Robert Elliott..... Registrar
Edith Hubbart.....Assistant Librarian
Nina A. Waters.....Matron of Dormitory
Garrett Dolliver.....Secretary to the President
Erastus Fjeld.....Station Stenographer
George E. Purdy.....Janitor and Carpenter
A. T. Larson.....Engineer
Fred C. Stoltenberg.....Florist

Faculty Committees

Faculty Committees will be announced at the beginning of the college year.

Members of Station Council

T. W. Dwight...Member Regents' Committee for the College
J. W. Campbell..Member Regents' Committee for the College
Ellwood C. Perisho.....President of the College
James W. Wilson.....Director and Animal Husbandman
Niels E. Hansen.....Vice Director and Horticulturist
James H. Shepard.....Chemist
Christian Larsen.....Dairy Husbandman
Albert N. Hume.....Agronomist

General Information

HISTORICAL SKETCH.

Establishment.—An act of the Territorial Legislature approved February 21, 1881, provided that "an Agricultural College for the Territory of Dakota be established at Brookings, * * * * provided that a tract of land of not less than eighty acres be secured and donated to the Territory of Dakota."

The legislature of 1883 provided for the erection of the first building. This building, now known as the Central Building, was opened for use September 24, 1884.

The Enabling Act admitting the state of South Dakota, approved February 22, 1889, provided that 120,000 acres of land be granted for the use and support of the agricultural college, as provided in the acts of congress making donations of lands for such purpose. The acts of congress here referred to are, primarily, the act of July 2, 1862, known as the Morrill Act, providing that 30,000 acres of public land for each representative in congress be given to each state towards "the endowment, support, and maintenance of at least one college, where the leading object shall be, without excluding scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts."

By the Enabling Act of 1889 Congress granted to South Dakota for the Agricultural College 40,000 additional acres, in lieu of a grant that had been made to new states in 1841. Thus the total land grant for the Agricultural College was 160,000 acres.

In the Morrill Act of 1862, such colleges were spoken of as "Colleges of Agriculture and Mechanic Arts." In order that the name might more nearly conform to the object for which the College was established, the legislature of 1907 changed the name from "The Agricultural College of South Dakota," to "The State College of Agriculture and Mechanic Arts."

The Experiment Station was organized in 1887 under the Hatch Act of Congress, which provided for the establishment of agricultural experiment stations in connection with agricultural colleges. These stations were established for the purpose of conducting experiments and research work in connection with all branches of the agricultural industries of the United States, due regard being paid to the varying conditions and needs of the respective states. It is also their object to aid in diffusing among the people useful and practical information on all subjects connected with agriculture. The South Dakota Station conducts its investigations chiefly along the following lines: live stock, veterinary science, soils, field experiments, greenhouse work, trees and small fruits, and chemistry of plant growth and foods.

The Extension Division was established to carry to the people of the state the results of the work of the College. From its earliest history the College has sent out members of its staff to help the people of the state by addressing meetings, acting as judges at fairs and for agricultural clubs, and in various other ways. The College, however, has had no money available to conduct such work in a systematic way until recently. In May, 1914, the Smith-Lever Act was passed by Congress providing $10,000 annually to each state beginning with July 1, 1914, to be used for agricultural extension work by the State Colleges of Agriculture in cooperation with the United States Department of Agriculture. The act also provides that beginning with July 1, 1915, additional amounts which increase from year to year are to be given to the different states upon the condition that the states appropriate equal amounts to be used in connection with the national fund for extension work.

During the present fiscal year the College has organized an extension force and has placed experts in the field to conduct demonstration work in agriculture and home economics, and to organize Boys' and Girls' Clubs.

Sources of Income.—A joint resolution passed by the legislature of 1890 accepted the lands granted in the enabling act. These lands were not at once assigned. The Commissioner of

Public Lands reported that 64,658 acres had been selected. All have since been selected; very few have been sold. A small amount is rceived yearly as rental. The first income recorded was $1,197.71, Sept. 1, 1896. As no school lands may be sold for less than ten dollars an acre, these lands, when sold, will probably yield an endowment of two million dollars, the interest from which will probably be sufficient for the needs of the college.

The Morrill Act passed by Congress in 1890 provides a yearly appropriation for "the more complete endowment and support of colleges for the benefit of agriculture and mechanic arts." Under this act the College now receives from the general government the sum of $25,000 per annum.

An act making appropriation for the Department of Agriculture, approved by Congress March 4, 1907, provides for the further endowment and support of these colleges. The bill, which was introduced by Senator Knute Nelson of Minnesota, stipulates that the expenditure of the fund shall be governed in all respects by the provisions of the Morrill Act, and also that a portion of the money may be used to provide for the training of instructors in agriculture and mechanic arts. This act made an appropriation of $5,000 for the year 1907-1908, which increased $5,000 each year until it reached $25,000 per annum. The College, therefore, receives $50,000 annually from the National Government for instructional purposes.

The College also receives aid from the State, biennial appropriations being made by the legislature for maintenance and buildings.

The Hatch Act provides that the experiment stations should receive $15,000 annually from the National Government. This amount has been increased by the provisions of the Adams Act of 1906, so that the experiment station now receives $30,000 a year for maintenance.

Under the Smith-Lever Act the College receives $10,000 annually from the National Government for extension work. Under the same act during each of the next two years the College will receive $6,167 and $11,308 respectively on the condition that equal amounts are provided by the State to be

used with the national funds. The State Legislature of 1915 has appropriated $25,000 and $30,000 respectively for each of the next two years to meet this condition and for additional extension work in the State.

LOCATION, BUILDINGS AND EQUIPMENT

The Location.—The College is located upon an eminence one mile from the business center of Brookings, which has a population of about three thousand five hundred people. The city is situated on the Central Dakota Division of the Chicago and North-Western Railway, the Watertown branch making connection with the main line at this point.

Brookings is almost an ideal college town. It is lighted by electricity and has a complete water and sewer system. Its streets are lined with trees and its houses have well kept lawns abounding in ornamental shrubs and plants.

It is a city of clean morals. No saloon has been allowed within its limits for years; and the last few times when the question of allowing saloons within the city has been submitted to a vote of the people, it has been defeated by overwhelming majorities.

The College Buildings and Grounds.—The college campus upon and about which the college buildings are placed is beautifully located on an eminence within the corporate limits of Brookings. It is ornamented with choice and tasteful varieties of trees and shrubs and laid out with necessary walks and drives. Adjoining on the rear are the horticultural gardens, and to the north and northwest is the college farm.

The oldest building on the campus, called the Central Building, was erected in 1884. This and the other two old buildings, called, during recent years, the North Building and the Experiment Station Building, will in the future be given over to general class room and laboratory purposes.

The new Agricultural and Administration Building, which has been completed during the present college year, provides executive offices, an auditorium, laboratories, class rooms and offices for the various agricultural departments.

The Physics-Engineering Building is occupied by the physics and the engineering departments with their various class rooms, laboratories and shops.

The Plant Breeding Building, together with the large Greenhouse, furnishes room for the work that is being conducted by the departments of botany, horticulture and entomology.

The Chemistry-Pharmacy Building, a two-story structure, is occupied by the class rooms and laboratories of those departments.

The Creamery is a two-story building which was almost doubled in size in 1911 by an addition which was made to meet the growing demands upon this department.

The Gymnasium is a two-story building that is used for athletic exercises and military drill during the season when such work cannot be carried on outdoors. In connection with the Gymnasium a tract of land near the campus has been fitted up for outdoor exercises and sports.

Wenona Hall, a splendid brick dormitory for young ladies, stands on a site just across the street from the campus.

The legislature of 1915 appropriated $75,000 for a new dormitory for young ladies.

The central heating and electric light plant occupies a brick structure in the rear of the campus. The buildings are all heated by steam and lighted by electricity generated in this plant.

Near the campus on the adjoining college farm are located the agricultural and the dairy barns, together with a number of smaller buildings which are devoted to agricultural purposes.

The Farm and Horticultural Gardens.—The college farm includes four hundred and sixty acres, about sixty acres of which are used by the Agricultural Experiment Station as an experimental farm. Here the field experiments with field crops, seed germination and soil preparation are conducted, and the students may witness and actually participate in this scientific work. The remainder of the farm is used as a model stock and dairy farm under the direction of the professor of animal hus-

bandry. Practical work in experiments involving the best farming practices for this region are given the students.

The Horticultural Gardens comprise about fifty acres adjoining the campus. Here and in the Greenhouse a large amount of work in fruit propagation and plant experimentation is being carried on.

The Laboratories, Shops and Museums.—Well fitted laboratories and shops have been provided in all those departments where their use is made necessary by modern educational methods. The value of illustrative materials has been recognized, and numerous departments have made large collections and museums. The equipment of the various departments is described in connection with their work.

The Library and Reading Room.—The library, occupying rooms on the first floor of the Central Building, contains over 16,000 bound volumes and about 6,000 pamphlets. The institution is a repository for the government and contains a set of government publications dating from 1886. Many of the more valuable sets have been extended to an earlier date. Care has been exercised in the selection of books, in order that each department may have proper reference books at the disposal of the students. The books are arranged according to the Dewey system of classification and are completely catalogued in the card catalogue. The library also receives the cards from the government cataloguing the bulletins of the experiment stations and the publications of the United States Department of Agriculture. The files of many standard scientific and literary periodicals are kept bound. The reading room is abundantly supplied with current periodicals and newspapers. The library is open nearly all the time, day and evening, and at the disposal of students for the purpose of study and reading. Someone is in charge at all times to give help and information to those using the library.

The Postal Facilities.—The College furnishes first-class postal facilities, the mail of the student being delivered at the college at convenient times during the day, making it unnecessary for them to walk to the city postoffice.

ORGANIZATION AND GOVERNMENT

The Board of Regents.—By an act of the legislature approved March 10, 1897, provision was made for the appointment of the Regents of Education, who have charge of all of the educational institutions which are maintained either wholly or in part by the state. The terms of office of the regents are each six years and expire at different times, so that the board is a continuous body. Appointments to the board are made by the Governor, with the approval of the senate, "of persons of probity and wisdom from among the best and best known citizens, residents of different portions of the state, none of whom shall reside in the counties in which any of the state educational institutions are located, who shall be designated as the Regents of Education."

Among the powers and duties of the regents as defined by law some important ones are, to employ members of the different faculties and other agents, to determine the proper number of teachers in said faculties, also their compensation and terms of employment, to establish departments, to settle upon courses of study, to determine the rules to be enacted for the government of students, to decide upon text books to be used, to fix tuition fees, to guard against unwise duplication of departments, to confer degrees, to control the Agricultural Experiment Station, and to promote education among the farmers by providing for institutes; in fact, to make all regulations as to the executive and instructional functions of the educational institutions of the state. The regents govern the College largely through a regents' committee.

The Faculty.—The faculty, consisting of the president and professors, all of whom are elected by the regents, determines in large part the general policy of the College. The professors are heads of the different departments of instruction which they represent and are responsible to the president, who is in charge of all matters of administration. The president, in turn, is responsible to the regents for the whole work of the institution. The president appoints, at the beginning of each college year, certain faculty committees which take up such work

as may be assigned them by the president and faculty. The members of the Experiment Station staff are heads of the corresponding departments of instruction of the college. The members of the Extension Division are representatives of the various college departments.

In the government of the College the faculty rely chiefly upon the sense of duty of the students. The student is expected to pursue his studies with diligence, to attend classes regularly and maintain good behavior at all times. Students are not only under the direct supervision of the faculty while on the campus, but are responsible for their conduct wherever they may be.

In order that the work of the College may be rendered as efficient as possible and all relations made harmonious, a set of regulations, chiefly governing matters of classification, has been adopted by the faculty. No set rules are expected to cover every condition that arises, and all students should recognize the importance of co-operation with the faculty in their efforts to make college life helpful to the student body as a whole.

STUDENT ACTIVITIES

Faculty Control.—While the students are allowed wide latitude in carrying on affairs which vitally concern themselves, such as athletic, literary, musical, social and other activities, the faculty retains an advisory interest in all such matters, and has the right at any time to pass reasonable regulations for the welfare of the College.

The Student Association.—The athletic, debating and oratorical interests and the college paper, the Industrial Collegian, are under the control of the Student Association which governs these activities by means of a board of control, consisting of students and members of the faculty. This board is organized into the Athletic, the Collegian, and the Debating Councils, each of which directs the respective interests that come under it. A fee of three dollars a semester, or propor-

tional sums for students whose work is arranged in terms shorter than the semester, is charged for membership, which admits the holder to all student exercises under the supervision of the association and pays for a subscription to the Collegian.

Athletics.—Under the auspices of the local organization and a number of college athletic associations of the state, all kinds of athletic sports are practiced and encouraged. The local representatives contest at the State Meet once a year for athletic honors. Students should understand, however, that their studies must receive the first consideration; and that the purpose of athletic exercises is to develop gentlemanly and ladylike qualities in those who participate in them.

Oratory and Debating.—Each year for a number of years representatives of the college have met students from other institutions in debating contests. The members of the local teams are chosen in a series of preliminary contests in which all are encouraged to take part. There has thus been aroused among the student body a large interest in this kind of work and a healthy rivalry to obtain places on the intercollegiate teams.

Credit for three hours work during one semester is given those who take part in an intercollegiate debate.

A representative of the college is sent each year to the inter-collegiate oratorical contest of the state. This student is selected by means of a local preliminary contest. In order that this contestant may fully represent the college, the faculty has imposed the requirement that those competing for this honor must be pursuing regular work for the Bachelor's degree.

The Student Publications.—The Industrial Collegian is a weekly paper published by the students of the College. It is intended to be a mirror of student life at this institution, and all phases of college activity have representatives on its staff of editors.

The Jack Rabbit is published annually by the junior class, and is a good representative and exponent of college life.

The Literary Societies.—The literary society is an important factor in the education of the student and all are strongly advised to take part in this kind of work. All preparatory students are expected to become members of the Franklin Society whose work is carried on under the supervision of the preparatory department, and is a preparation for the college societies.

The faculty and various citizens, recognizing the value of literary society work, have offered several trophies to be competed for by the Athenian and Miltonian Societies, which are composed of students of collegiate standing.

The Christian Associations.—In the state schools the Young Men's and Young Women's Christian Associations occupy unique positions. They are the only organizations whose primary object is the moral development of the student body. Their platforms are broad enough to allow every student who stands for pure manhood and womanhood to affiliate himself or herself with them. The purpose of the associations is to present the value of Christian living to the student and to the state, and to create an atmosphere of good-fellowship among the members of the student body. The Young Men's Christian Association is personally supervised by a secretary who is engaged to spend a large part of his time in directing this work. The Young Women's Christian Association is supervised by the state and international college secretaries.

Other Student Organizations.—Among these may be mentioned the Art Club which encourages interest in art by bringing exhibits to the College and in various other ways; the Glee Club, which often makes tours in the state; the Dramatic Club, which makes a study of some of the best dramatic literature, and presents a play each year; and the Agricultural Club, the Engineering Club, the Pharmacy Club and other organizations.

STUDENT EXPENSES

Tuition and Other Fees.—The tuition for regular work extending throughout the college year is six dollars per semester, or twelves dollars per year. For information concerning

tuition fees for work that is not arranged according to semesters, see the respective courses. A student who enrolls must pay the full tuition for the semester or term. A laboratory fee of two dollars per semester is charged for the use of each laboratory in which the student takes work. Books and other supplies are furnished by the student.

Special fees are charged for instruction in music in the College. (See the department of music.)

By action of the regents the tuition and incidental fees and laboratory fees, after having been paid, will in no case be refunded; but music, dormitory and other fees may be refunded at the discretion of the president of the College, if the student is called away before the end of the term or semester by unavoidable causes.

Estimate of Expenses.—An estimate of the yearly expenses of a student is as follows:

Board and Room	$200.00
Tuition	12.00
Fees in Student Association	6.00
Laboratory fees	10.00
Books and Supplies	25.00
Laundry Expenses	20.00
Incidentals	25.00
	$298.00

Men students are expected to purchase military uniforms which range in cost from $16.00 to $18.00.

While the above is considered as a reasonable estimate, many students go through the year on a less amount. Much depends upon the character of the student and the work he is taking.

Board and Rooms.—Good rooms and board can be obtained at private houses. A boarding club conducted in connection with the college furnishes board to the young men at a low cost, and the dormitory provides a large number of the young ladies with comfortable homes at reasonable rates. (See the following page for dormitory regulations.)

Every effort is made by the officers of the institution to secure suitable and satisfactory boarding places for students. A list of approved available places for boarding or rooming can be obtained at any time from the president of the College. The Christian Associations make it a point at all times to assist new students in finding proper living accommodations. If prospective students will write to the Young Men's or Young Women's Christian Association of the College, officers of these organizations will be glad to arrange to meet them at the train and help them to secure boarding and rooming places.

The Ladies' Dormitory.—This building is 120 by 50 feet in dimensions and three stories in height. In addition to the preceptress and other lady teachers, the matron and servants, it will provide a home for sixty women students.

Besides the general parlors and reception hall on the first floor, the second floor contains a general sitting room, while on the third floor is a recreation hall suitable for parties and plays which are attended by girls only. Two bath rooms. toilet rooms and lavatories are also on each floor. In addition, each room is provided with a large closet, and a stationary wash stand with hot and cold water.

Precautions have been taken to reduce danger from fire to a minimum. The building is heated with steam, lighted by electricity, and in every respect has the latest improvements and conveniences.

Each room is provided with two single cots or beds with mattresses and pillows, two straight chairs, study table, dresser with mirror, rug and window shades. Bedding, towels and other articles must be provided by the students. Each girl should provide herself with mattress pad, two pairs of pillow cases, three sheets, two pairs of blankets, napkin ring, six towels and a clothes bag.

The basement is provided with a large dining room, kitchen, store rooms, laundry and rooms for the help. Here a boarding club is conducted under the supervision of an experienced matron. Every effort is made to provide wholesome fare at minimum cost to the students. The cost of table board during the last two years has been about $3.00 a week. Payment for

board at the rate of $3.00 per week must be made for four weeks in advance. No deduction for board will be made for less than a week's absence.

Occupants of the building will be entitled to the laundering of a limited number of articles without extra cost.

The cost of rooms in the hall varies from $12 on the third floor to $14 on the first floor per semester for each occupant, two in a room. This fee includes both light and heat. The room rent is payable in advance. The occupants will be expected to take care of their own room.

A student desiring room reserved for her must forward $2.00 with her application. This will apply on the regular room rent for the semester. In no case will this advance payment be refunded.

Student Labor.—There is a limited amount of paid labor about the institution which can be done by students and it is the policy of the College authorities to give as much work to deserving students as is consistent with the best interests of all. However, no one should expect to earn his entire expenses while at college and doing school work unless he is assured in advance of such an income.

Scholarships.—The following articles from the law, defining powers and duties of the regents of education, is self-explanatory: "The Regents of Education shall fix all rates of tuition and other fees to be paid by students, but such rates must be the same in all different institutions. They may receive free of tuition two students appointed by each senator and one by each representative of the state legislature in any one of the institutions under their control, provided that the period for which appointment is made shall expire with the term of office of said senator or representative, and provided that such appointees shall comply with all the rules and requirements of the institution which they desire to enter. No student, however, shall receive any other gratuity whatever." The regents of education make this article operative in the case of this institution. The student must present his appointment to the secretary of the College at the time of enrollment in order to obtain credit for the same.

ENTRANCE REQUIREMENTS

Admission.—While students are admitted at any time and assigned to such classes as they are found best fitted to enter, it is much better to commence at the beginning of the college year. No reduction in college fees is made when the student enters after the beginning of the term, and if a student enters later he will not under any condition be allowed to hold a class back. If a tardy beginning is imperative the student must arrange with a tutor for assistance in bringing up his work, in order that he may go on understandingly and without hindrance to the class.

Candidates for admission to any department of the College must be at least fourteen years of age and of good moral character.

Credit in the College may be obtained by presenting certified grades from other institutions of reputable standing or through examination. The College reserves the right, however to cancel grades accepted from other schools should the student be found deficient in the subject for which he has received credit.

The College will furnish prospective students with application blanks, which, after being filled out with certified standings and other data, should be returned to the registrar.

The first two days of the first semester are devoted to the registration of students. All students should complete their registration at this time and new students must present their credits at or before this time if they expect to be assigned a proper classification.

Entrance Credits.—Students will be admitted to the four-year courses, and the two-year courses in Pharmacy upon presenting credit for fifteen units of high school or other secondary school work. A unit is a subject which is taught five periods a week throughout the school year, or the equivalent of this work.

Of the fifteen units required, eleven and one-half units are in prescribed subjects, the remaining three and one-half being in optional subjects as indicated below. A student who has

graduated from a creditable high school course of four years will in general be enrolled as a member of the freshman class, but in case the prescribed subjects have not been completed, he may be required to bring up this back work.

A student may be admitted to a college class without having passed in one or two of his entrance studies. These shall stand against him and must be cleared up within one year after entrance or the student will be required to take the subjects with the regular classes.

For the benefit of students who are unable to attend a high school to complete the preparatory requirements, a preparatory course is maintained. Students will not be admitted to this department unless they present evidence that they have completed the work of the public schools as far as the ninth grade. For the preparatory course, see the Preparatory Department.

The list of prescribed and optional subjects are shown in the following table:

Prescribed Units

English, four units. Not more than one year of this work should be the study of grammar; the remaining three years' work should consist of composition work and a study of some of the simpler American and English classics.

Algebra, one and a half units for engineering students, one unit for others. The fundamental operations, factoring, fractions, simple equations, involution, evolution, radicals, quadratic equations and the analysis and solutions of problems involving these principles.

Plane Geometry, one unit. The completion of this part of geometry. Special emphasis should be paid to the solutions of original problems and constructions.

Elementary Physics, one unit. One year's work covering the science as presented in the best text books. Laboratory work should accompany the text book work.

History, one and a half units. This work should follow, and not include, elementary United States History, and should

be a connected study of some of the following lines: ancient, medieval, modern, English, American history.

Civics, one half unit. A study of the constitutions of the United States and of the state, as presented in the best high schools.

Foreign Language, two units. These credits should be for two years' work in some one of the languages, German, French or Latin. In case a student is a graduate of a four-year high school course which does not include any foreign language, credits in the natural science may be substituted for these two units.

Optional Units

The three and one-half optional units may be offered in the same lines of work as the prescribed units and in other departments, as indicated by the table below. About the only requirement made concerning the work for which credit is offered is that it should be of a reasonably high standard. The maximum credit that is allowed in each subject is indicated in the table. While no minimum is stated it is expected that a student shall have covered a reasonable amount of a subject before being given any credit in it.

	Prescribed Units	Maximum Allowed
English	4	4
*Algebra, thru quadratics	1½	1½
Plane Geometry	1	1
Elementary Physics	1	1
History, following elementary U. S. History.	1½	3
*Foreign Language, German, French or Latin	2	4
Civics	½	½
Science—		
Agriculture	.....	1
Physiology, following Biology, Zoology or Botany	.....	½
Botany	.....	1
General Biology	.....	1
Zoology	.....	1
Geology	.....	½
Physical Geography	.....	½

Bookkeeping	.....	½
Commercial Geography	.....	½
Freehand Drawing	.....	½
Manual Training, including Mechanical Drawing	.....	1
Cooking	.....	½
Sewing	.....	½
Solid Geometry	.....	½

*See above for exceptions.

STUDIES

The Credit Hour.—Credit for college work is counted in credit hours. A credit hour is one hour of class or lecture work requiring an additional hour and a half in preparation. Two hours in laboratory work is counted equivalent to one hour spent in the class room.

Registration.—In registering for work the student is advised by a member of the faculty who helps him to make out a consistent schedule of studies. In general, students are not allowed to classify in more than twenty or less than fourteen credit hours a week. The faculty recognize that, because of differences in subjects and in the ability of students, some are able to carry a larger number of hours than others, and endeavor to assign to each student enough work to keep him reasonably busy without overloading him.

Special Students.—Students of mature years who have passed in the work of the preparatory department may be allowed to pursue special studies if not candidates for a degree, but they must satisfy the faculty that they are qualified to take up the studies desired.

Military Requirements.—The national law organizing and endowing these agricultural colleges requires that military science shall form part of the instruction offered. All male students taking regular work in the College are required to do certain work in this department, unless excused because of physical disability or some other grave reason. Certificates of disability should be obtained from the physician whom the

College authorities have designated for such work, the College bearing the expense of the examination. For further regulations governing this work see the military department.

Grades.—All grades of students will hereafter be reported to the registrar by means of the letters, M, S, E, I, P and F. The letter M means that the student's work is of medium or average grade. The letter S, meaning superior, indicates that the work is above the average, but is not as high as E, which means that the student's work is excellent or so high above the average as to merit special mention. The letter I means inferior or below the average, but is higher than P, meaning passed, which indicates that the student has only a sufficient knowledge to make it unprofitable for him to repeat the subject. The letter F means that the student has failed to receive a passing grade.

Conditioned Students.—Any student who without good reason has failed to receive a passing grade in a reasonable amount of his work will be registered only conditionally for further work. And if any student at any time is not carrying the work in which he is classified at a passing grade, or fails to perform other duties which may be expected of him, he may be placed upon the conditioned list and thus debarred from certain student privileges.

Absences.—Students are expected to attend regularly all the exercises of the classes to which they are assigned. When a student finds it necessary to be absent he should get an excuse in advance, if possible. Otherwise he should present an excuse to the committee having this matter in charge at the time and place they may designate. Excuses will be granted only when the absence seems necessary, and such penalties will be imposed upon students for unexecused absences as the faculty may deem proper. Should a student find it necessary to be late to his class he should make a satisfactory explanation to his instructor at the close of the period.

Extra credits will be required of students for absences from college duties, whether the absences are excused or not, unless the students are absent officially representing the Col-

lege. While the faculty will do all that is reasonably possible to assist students to bring up work which has been missed because of sickness or for other good reasons, they recognize the principle that even a good excuse should not stand in lieu of scholarship.

DEGREES AND CERTIFICATES

Degrees.—The courses of study leading to degrees given by the College are as follows:

The two year course in Pharmacy, leading to the degree of Pharmacy Graduate. For additional work of two years leading to the degree of Bachelor of Science, see schedule of Pharmacy Course.

The four-year course in Agriculture, in which the student may specialize along the lines of animal husbandry, dairy husbandry, agronomy, horticulture and plant pathology. Upon the completion of one of these schemes, under the direction of the head of the department in which the group of electives is chosn, the student will receive the degree of Bachelor of Science.

The four-year course in Home Economics leading to the degree of Bachelor of Science.

The four-year courses in Mechanical, Electrical and Civil Engineering, leading to the degree of Bachelor of Science, (B. S.). In order to meet a constantly increasing demand for better equipped and more thoroughly trained men along the several lines of engineering activities, an additional fifth year course of study is offered in the three engineering departments. Upon the completion of this additional year's work, the advanced degree, Mechanical Engineer, Electrical Engineer, or Civil Engineer, will be conferred. This work, which is nearly all prescribed, is a continuation of the work pursued in the undergraduate courses, and is intended more fully to equip the student with special training along the particular line of work which he desires to pursue after leaving college.

The four-year course in General Science, leading to the degree of Bachelor of Science. The work of this course is

largely elective and is planned to give the student a liberal education, at the same time permitting specialization in the sciences.

The degree of Master of Science is offered to students who have received the Bachelor's degree either from this institution or from other institutions of equal rank, and who in addition have completed at least one full year's resident work, i. e., forty credit hours, in advanced study and have shown a reasonable proficiency in such work. At least two-thirds of this work must be in some one line of study, called the major work. The scheme of study presented by the student for the degree must be prescribed by the faculty committee on advanced degrees, who will outline the work in consultation with the head of the department in which the major work is taken.

It should be understood that the work for this degree cannot be subjected to rigid regulation, and that each case must be dealt with on its individual merits.

Special Courses.—The College also offers special courses in several important and practical lines of work. These are mentioned in other parts of the catalog under the proper headings, and are as follows:

The four-year course in the School of Agriculture.

The one-year secretarial course.

The five-months course in steam engineering.

The three-months creamery course.

The special work in vocal and instrumental music.

The special work in art.

The one-week dairy course for cream testers.

The farm and home course, for farmers and farmers' wives.

Courses of Study.—The work leading to a Bachelor's degree and the degree of Pharmacy Graduate is mapped out on the following pages. The conditions for entrance to these courses may be found under "Entrance Requirements." The notation immediately after the name of a subject indicates its

nature and the number of times it occurs a week, "a" referring to the class work, and "b" to the laboratory exercises. A department will not be required to give an elective unless at least five students are registered for the subject.

Course in Agriculture

FRESHMAN YEAR

First Semester—

Rhetoric, a 3	English	9
Chemistry, a & b 5	Chemistry	1
Farm Crops, a 2 b 3	Agronomy	1
Stock Judging, a 2 b 2	Animal Husbandry	1
Military Tactics, 3		
Elective, a 4		
French, a 4	French	1
German, a 4	German	1

Second Semester—

Rhetoric, a 3	English	10
Chemistry, a & b 5	Chemistry	2
Farm Dairying, a 2 b 1	Dairy Husbandry	1
Breeds of Live Stock, a 3	Animal Husbandry	2
Veterinary Anatomy, a 2	Veterinary	1
Military Tactics, 3		
Elective, a 4		
French, a 4	French	2
German, a 4	German	2

SOPHOMORE YEAR

First Semester—

Botany, a 2 b 3	Botany	2
Quantitative Chemistry, b 5	Chemistry	3
English Literature, a 3	English	17
Entomology, a 1 b 1	Entomology	3
Horticulture, b 1	Horticulture	1
Military Tactics, 3		
Elective, a 4		
French, a 4	French	3
German, a 4	German	3

Second Semester—

Botany, a 2 b 3	Botany	3
Organic Chemistry, a & b 5	Chemistry	11

Military Science, a 1 .....Military Science 1
Entomology, a 1 b 2 .....Entomology 4
Horticulture, b 1 .....Horticulture 2
Military Tactics, 3 .....
Elective, a 4 .....
French, a 4 .....French 4
German, a 4 .....German 4

*Animal Husbandry Group—Agriculture Course.

(For Freshman and Sophomore Years, See Above)

JUNIOR YEAR

First Semester—

General Zoology, a 2 b 3 .....Zoology 3
Soils, a & b 5 .....Agronomy 4
Psychology a 3 .....Education 1
Anatomy of Conformation and Soundness, a 2....Veterinary 3
Animal Mechanics, a 2 .....Veterinary 4
Elective, a 2 .....

Second Semester—

General Zoology and Veterinary Physiology, a 2 b 3..Zoology 4
Soils, a & b 5 .....Agronomy 5
Principles of Animal Breeding, a 3 .....Animal Husbandry 4
Animal Nutrition, a 3 .....Animal Husbandry 5
Elective, a 3 .....

SENIOR YEAR

First Semester—

Economics, a 3 .....History 15
Advanced Stock Judging, a 2 .....Animal Husbandry 3
Stock Feeding, a 3 .....Animal Husbandry 6
Veterinary Medicine, a 3 .....Veterinary 2
Stable Hygiene, a 3 .....Veterinary 5
Elective, a 5 .....

Second Semester—

Agricultural Chemistry, a 3 .....Chemistry 6
Agricultural Economics, a 3 .....History 16
Live Stock Management, a 2 .....Animal Husbandry 7
Architectural Drawing, b 3 .....Mechanical Engineering 6
Elective, a & b 9 .....

*The courses in Agricultural Education are so arranged that a student in this group may elect twelve hours, consisting of History of Education, Principles of Education, Organization and Administration of Education, and Principles of Teaching, thereby securing a state certificate and being prepared to teach in any high school in the state. It is quite frequently an advantage to the student to have this additional preparation for opening opportunities.

Dairy Husbandry Group—Agriculture Course.

(For Freshman and Sophomore Years, See Above)

JUNIOR YEAR

First Semester—

General Zoology, a 2 b 3 ..... Zoology 3
Soils, a & b 5 ..... Agronomy 4
Inspection & Testing Dairy Products, a & b 4 .....
..... Dairy Husbandry 2
General Bacteriology, a & b 5 ..... Zoology 10

Second Semester—

General Zoology, a 2 b 3 ..... Zoology 4
Dairy Bacteriology, a 2 b 3 ..... Dairy Husbandry 3
Dairy Technology, a 2 b 2 ..... Dairy Husbandry 7
*Soils, a & b 5 ..... Agronomy 5
Principles of Animal Breeding, a 3 ..... Animal Husbandry 4
Elective, a & b 5 .....

SENIOR YEAR

First Semester—

Factory Operation (Creamery), a 3 b 2.... Dairy Husbandry 4
Dairy Management, a 2 b 2 ..... Dairy Husbandry 6
Economics, a 3 ..... History 15
Psychology, a 3 ..... Education 1
Elective, a & b 5 .....

Second Semester—

Agricultural Economics, a 3 ..... History 18
Factory Operation (Cheese), a 3 b 2..... Dairy Husbandry 5
Elective, a & b 10 .....

*Elective.

*Agronomy Group—Agriculture Course.

(For Freshman and Sophomore Years, See Above)

JUNIOR YEAR

First Semester—

General Zoology, a 2 b 3 ..... Zoology 3
Soils, a & b 5 ..... Agronomy 4
Elective, a & b 8 .....

Second Semester—

Farm Crops, a 3 b 2 ..... Agronomy 2
General Zoology and Veterinary Physiology, a 2 b3.. Zoology 4
Soils, a & b 5 ..... Agronomy 5
Elective, a & b 3 .....

SENIOR YEAR

First Semester—

Economics, a 3 ..... History 15
Psychology, a 3 ..... Education 1
Geology, a 3 b 2 ..... Agronomy 9
Elective, a & b 8 .....

Second Semester—

Agricultural Economics, a 3 ..... History 18
Heredity, a 2 b 1 ..... Botany 10
Elective, a & b 12 .....

*The courses in Agricultural Education are so arranged that a student in this group may elect twelve hours, consisting of History of Education, Principles of Education, Organization and Administration of Education, and Principles of Teaching, thereby securing a state certificate and being prepared to teach in any high school in the state. It is quite frequently an advantage to the student to have this additional preparation for opening opportunities.

Horticulture and Plant Pathology Group—Agriculture Course

(For Freshman and Sophomore Years, See Above)

JUNIOR YEAR

First Semester—

General Zoology, a 2 b 3 ..... Zoology 3
Soils, a & b 5 ..... Agronomy 4
Mycology, a 2 b 3 ..... Botany 5
Systematic Pomology, b 1 ..... Horticulture 5
Architectural Drawing, b 3 ..... Mechanical Engineering 6

Second Semester—

General Zoology and Veterinary Physiology, a 2 b 3 . Zoology 4
Soils, a & b 5 ..... Agronomy 5
Heredity and Plant Breeding, a 2 b 1 ..... Botany 10
Plant Physiology, a 2 b 3 ..... Botany 4
Floriculture and Market Gardening, b 2 ..... Horticulture 3

SENIOR YEAR

First Semester—

Economics, a 3 ..... History 15
Psychology, a 3 ..... Education 1
Forestry, a 2 ..... Horticulture 4
Elective, a & b 12 .....

Second Semester—

Agricultural Economics, a 3 ..... History 18
Landscape Gardening, b 2 ..... Horticulture 6
Elective, a & b 15 .....

Home Economics

FRESHMAN YEAR

First Semester—

Rhetoric, a 3 ..... English 9
Drawing, b 2 ..... Art 14
Elementary Chemistry, a & b 5 ..... Chemistry 1
Principles of Cookery, a 2 b 3 ..... Home Economics 3
Elective, a 4 .....
French, a 4 ..... French 1
German, a 4 ..... German 1

Second Semester—

Rhetoric, a 3 ..... English 10
Drawing, b 2 ..... Art 15
Elementary Chemistry, a & b 5 ..... Chemistry 2
Physics of Heat, a 2 ..... Physics 9
Textiles and Principles of Sewing, a 2 b 2 .. Home Economics 10
Elective, a 4 .....
French, a 4 ..... French 2
German, a 4 ..... German 2

SOPHOMORE YEAR

First Semester—

English Literature, a 3 ..... English 11
Household Chemistry, a & b 5 ..... Chemistry 8
General Botany, a 2 b 3 ..... Botany 1
Preparatory Dressmaking, a 1 b 2 ..... Home Economics 11
Elective, a 4 .....
French, a 4 ..... French 3
German, a 4 ..... German 3

Second Semester—

English Literature, a 3 ..... English 12
Chemistry of Foods and Nutrition, a & b 5 ..... Chemistry 4
General Botany, a 2 b 3 ..... Botany 2
Theory of Design, a 2 ..... Art 3
Elective, a 4 .....
French, a 4 ..... French 4
German, a 4 ..... German 4

JUNIOR YEAR

First Semester—

English Literature, a 3 ..... English 13
History, Medieval, a 3 ..... History 7
General Zoology & Physiology, a 2 b 3 ..... Zoology 2

Bacteriology, a & b 5 ..... Zoology 10
Psychology, a 3 ..... Education 1

Second Semester—

English Literature, a 3 ..... English 14
History, Modern, a 3 ..... History 8
General Zoology & Physiology, a 2 b 3 ..... Zoology 3
Advanced Dressmaking, a & b 3 ..... Home Economics 12
Serving and Dietetics, a 1 b 2 ..... Home Economics 4
Elective .....
Ethics, a 3 ..... Education 2
Child Psychology, a 3 ..... Education 6

SENIOR YEAR

First Semester—

Economics, a 3 ..... History 15
Art History, a 2 ..... Art 6
Applied Design, b 2 ..... Art 4
Sanitation, a 3 ..... Home Economics 6
Home Nursing, a 3 ..... Home Economics 7
The House and Market, a 3 ..... Home Economics 8
Elective, a 3 .....
Principles of Teaching, a 3 ..... Education 5
English Literature, a 3 ..... English 15 or 19
Nature Study, a 3 ..... Entomology 12

Second Semester—

Astronomy, a 3 ..... Mathematics 15
Sociology, a 3 ..... History 16
Art History, a 2 ..... Art 7
Applied Design, b 2 ..... Art 5
Special Problems in Cookery, a 1 b 2 ..... Home Economics 5
Elective, a & b 5 .....
Bird Life, a & b 2 ..... Entomology 11
Household Insects, a 2 ..... Entomology 9
English Literature, a 3 ..... English 16 or 20
Principles of Education, a 3 ..... Education 7

Mechanical Engineering

FRESHMAN YEAR

First Semester—

Rhetoric, a 3 ..... English 9
College Algebra, a 5 ..... Mathematics 8

Elementary Chemistry, a & b 5 .....Chemistry 1
Mechanical Drawing, b 5 .....Mechanical Engineering 5
Military Tactics, 3 .....

Second Semester—

Rhetoric, a 3 .....English 10
Plane and Spherical Trigonometry, a 5 .....Mathematics 9
Elementary Chemistry, a & b 5 .....Chemistry 2
Machine Shop, b 3 .....Mechanical Engineering 3
Surveying, a & b 2 .....Civil Engineering 1
Military Tactics, 3 .....

SOPHOMORE YEAR

First Semester—

Analytic Geometry, a 5 .....Mathematics 11
General Physics, a 3 b 2 .....Physics 3
English Literature, a 3 .....English 17
Machine Shop, b 5 .....Mechanical Engineering 4
Military Tactics, 3 .....

Second Semester—

Calculus, a 5 .....Mathematics 12
General Physics, a 3 b 2 .....Physics 4
English Literature, a 3 .....English 18
Descriptive Geometry, a & b 1 ....Mechanical Engineering 7
Machine Design, b 4 .....Mechanical Engineering 8
Elements of Military Science, a 1 .....Military 1
Military Tactics, 3 .....

JUNIOR YEAR

First Semester—

Machine Design, b 2 .....Mechanical Engineering 9
Elements of Mechanism, a 3 .....Mechanical Engineering 16
Electricity and Magnetism, a 3 b 1 ..Electrical Engineering 1
Hydraulics, a 3 .....Civil Engineering 5
Analytic Mechanics and Calculus, a 5 .....Mathematics 13
Graphic Studies, b 2 .....Civil Engineering 3

Second Semester—

Analytic Mechanics, a 3 .....Mathematics 14
Steam Engines and Thermodynamics, a 5 .....
.....Mechanical Engineering 12
Mechanics of Materials, a 5 .....Mechanical Engineering 16
Electrical Measurements, b 1 .....Electrical Engineering 2
Dynamo Electrical Machinery, a 3 b 2..Electrical Machinery 3

SENIOR YEAR

First Semester—

Masonry and Foundations, a 2 ....Mechanical Engineering 27
Experimental Engineering, b 3 ....Mechanical Engineering 17
Steam Boilers, a 2 .....Mechanical Engineering 13
Engineering Design, b 5 .....Mechanical Engineering 21
Highway Construction, a 2 (1915) or ....Civil Engineering 4
Irrigation, a 2 (1916) .....Civil Engineering 11
Economics, a 3 .....History 15

Second Semester—

Experimental Engineering, b 5 ....Mechanical Engineering 19
Structural Design, b 5 .....Mechanical Engineering 22
Contracts and Specifications, a 2 .....Civil Engineering 13
General Astronomy, a 3 .....Mathematics 15
Gas and Oil Engines, a 2 .....Mechanical Engineering 11

Fifth Year Subjects in Mechanical Engineering

First Semester—

Alternating Current, a 3 b 2 .....Electrical Engineering 4
Structural Design, b 3 .....Mechanical Engineering 21
Statics, a 2 .....Mechanical Engineering 24
Thesis, a 2 .....Mechanical Engineering 27
Elective, 5 .....

Second Semester—

Kinematics, b 2 .....Mechanical Engineering 14
Structural Engineering, b 2 .....Mechanical Engineering 22
Heating and Ventilation, a 2 .....Mechanical Engineering 25
Thesis, a & b 3 .....Mechanical Engineering 28
Railroad Engineering, a 3 .....Civil Engineering 19
Elective, 5 .....
Note—All Electives must be taken in the department.

Electrical Engineering

FRESHMAN YEAR

First Semester—

Rhetoric, a 3 .....English 9
College Algebra, a 5 .....Mathematics 8
Elementary Chemistry, a & b 5 .....Chemistry 1
Mechanical Drawing, b 5 .....Mechanical Engineering 5
Military Tactics, 3 .....

Second Semester—

Rhetoric, a 3 ..... English 10
Plane and Spherical Trigonometry, a 5 ..... Mathematics 9
Elementary Chemistry, a & b 5 ..... Chemistry 2
Machine Shop, b 3 ..... Mechanical Engineering 3
Surveying, a & b 2 ..... Civil Engineering 1
Military Tactics, 3 .....

SOPHOMORE YEAR

First Semester—

Analytic Geometry, a 5 ..... Mathematics 11
General Physics, a 3 b 2 ..... Physics 3
English Literature, a 3 ..... English 17
Machine Shop, b 5 ..... Mechanical Engineering 4
Military Tactics, 3 .....

Second Semester—

Calculus, a 5 ..... Mathematics 12
General Physics, a 3 b 2 ..... Physics 4
English Literature, a 3 ..... English 18
Descriptive Geometry, a & b 1 ..... Mechanical Engineering 7
Machine Design, b 4 ..... Mechanical Engineering 8
Elements of Military Science, a 1 ..... Military 1
Military Tactics, 3 .....

JUNIOR YEAR

First Semester—

Electricity and Magnetism, a 3 b 2 .... Electrical Engineering 1
Machine Design, b 2 ..... Mechanical Engineering 9
Elements of Mechanism, a 3 ..... Mechanical Engineering 10
Hydraulics, a 3 ..... Civil Engineering 5
Analytic Mechanics and Calculus, a 5 ..... Mathematics 13
Graphic Statics, b 2 ..... Civil Engineering 3

Second Semester—

Analytic Mechanics, a 3 ..... Mathematics 14
Electrical Measurements, b 1 ..... Electrical Engineering 2
Dynamo Electric Machinery, a 3 b 2 .. Electrical Engineering 3
Steam Engines and Thermodynamics, a 5 .....
..... Mechanical Engineering 12
Mechanics of Materials, a 5 ..... Mechanical Engineering 16

SENIOR YEAR

First Semester—

Alternating Currents, a 3 b 2 ..... Electrical Engineering 4
Dynamo Design, b 3 ..... Electrical Engineering 5

Masonry and Foundations, a 2 .....Mechanical Engineering 27
Steam Boilers, a 2 .....Mechanical Engineering 13
Experimental Engineering, b 3 ....Mechanical Engineering 17
Economics, a 3 .....History 15

Second Semester—

Electric Light and Power Distribution, a 3 b 2 .....
.....Electrical Engineering 6
Experimental Engineering, b 5 ....Mechanical Engineering 19
Contracts and Specifications, a 2 .....Civil Engineering 13
General Astronomy, a 3 .....Mathematics 15
Gas and Oil Engines, a 2 .....Mechanical Engineering 11

Fifth Year Subjects in Electrical Engineering

First Semester—

Electric Traction, a 3 b 2 .....Electrical Engineering 7
Principles of Electrical Engineering, a 3 .....
..... Electrical Engineering 8
Electrical Design, b 3 .....Electrical Engineering 9
Thesis, a & b 2 .....Electrical Engineering 12
Irrigation, a 2 (1916) or .....Civil Engineering 11
Highway Construction, a 2 (1915) .....Civil Engineering 4
Elective, 2 .....

Second Semester—

Design of Power Stations, a 2 b 3....Electrical Engineering 10
Long Distance Transmission, a 2 ....Electrical Engineering 11
Thesis, a or b 3 .....Electrical Engineering 13
Railroad Engineering, a 3 .....Civil Engineering 19
Elective, 5 .....

Note—Electives must be taken in the department.

Special electives in Electrical Engineering subjects will be offered in the senior and fifth years.

Civil Engineering

FRESHMAN YEAR

First Semester—

Rhetoric, a 3 .....English 9
College Algebra, a 5 .....Mathematics 8
Elementary Chemistry, a & b 5.....Chemistry 1
Mechanical Drawing, b 5 .....Mechanical Engineering 5
Military Tactics, 3 .....

Second Semester—

Rhetoric, a 3 ..... English 10
Plane and Spherical Trigonometry, a 5 ..... Mathematics 9
Elementary Chemistry, a & b 5 ..... Chemistry 2
Machine Shop, b 3 ..... Mechanical Engineering 3
Plane Surveying, a & b 2 ..... Civil Engineering 1
Military Tactics, 3 .....

SOPHOMORE YEAR

First Semester—

Analytic Geometry, a 5 ..... Mathematics 11
General Physics, a 3 b 2 ..... Physics 3
English Literature, a 3 ..... English 17
Plane and Topographical Surveying, a & b 5 .....
..... Civil Engineering 2
Military Tactics, 3 .....

Second Semester—

Descriptive Geometry, a & b 1..... Mechanical Engineering 7
Calculus, a 5 ..... Mathematics 12
General Physics, a 3 b 2 ..... Physics 4
English Literature, a 3 ..... English 18
Elements Military Science, a 1 ..... Military 1
Machine Design, b 4 ..... Mechanical Engineering 8
Military Tactics, 3 .....

JUNIOR YEAR

First Semester—

Analytic Mechanics and Calculus, a 5 ..... Mathematics 13
Electricity & Magnetism, a 3 b 2 .... Electrical Engineering 1
Elements of Mechanism, a 3 ..... Mechanical Engineering 10
Hydraulics, a 3 ..... Civil Engineering 5
Graphic Statics, b 2 ..... Civil Engineering 3
Highway Construction, a 2 (1915) or .... Civil Engineering 4
Irrigation, a 2 (1916) ..... Civil Engineering 11

Second Semester—

Analytic Mechanics, a 3 ..... Mathematics 14
Steam Engines and Thermodynamics, a 5 .....
..... Mechanical Engineering 12
Mechanics of Materials, a 5 ..... Mechanical Engineering 16
Stresses, a 4 ..... Civil Engineering 6
Railroad Surveying, a 1 b 2 (1916) or ... Civil Engineering 7
Sanitary Engineering, a 3 (1915) ..... Civil Engineering 15

SENIOR YEAR

First Semester—

Economics, a 3 ..... History 15
Geology, a 5 or ..... Agronomy 10
Bacteriology, a & b 5 ..... Zoology 10
Structural Details, a 2 ..... Civil Engineering 8
Structural Steel Design, b 3 ..... Civil Engineering 9
Masonry and Foundations, a 2 .... Mechanical Engineering 27
Experimental Engineering, b 1 .... Mechanical Engineering 18
Geodetic Surveying, a & b 2 ..... Civil Engineering 10
Irrigation, a 2 (1916 or ..... Civil Engineering 11
Highway Construction, a 2 (1915)..... Civil Engineering 4

Second Semester—

General Astronomy, a 3 ..... Mathematics 15
Contracts and Specifications, a 2 ..... Civil Engineering 13
Bridges and Dams, a 2 b 2 ..... Civil Engineering 12
Reinforced Concrete, a 3 ..... Civil Engineering 14
Sanitary Engineering, a 3 (1915) or ..... Civil Engineering 15
Railroad Surveying, a 1 b 2 (1916) ..... Civil Engineering 7
Experimental Engineering, b 2 .... Mechanical Engineering 20

Fifth Year Subjects in Civil Engineering

First Semester—

Steel Buildings, a & b 3 ..... Civil Engineering 16
Hydraulic Motor, a 3 ..... Civil Engineering 18
Dam and Reservoir Design, b 3 ..... Civil Engineering 17
Thesis, a 2 ..... Civil Engineering 20
Elective, 5 .....

Second Semester—

Dynamo Electric Machinery, a 3 b 2.. Electrical Engineering 3
Kinematics, b 2 ..... Mechanical Engineering 14
Railroad Engineering, a 3 ..... Civil Engineering 19
Thesis, a & b 3 ..... Civil Engineering 21
Elective, 5 .....
Note—Electives must be chosen in the department.

General Science

FRESHMAN YEAR

First Semester—

Rhetoric, a 3 ..... English 9
Elementary Chemistry, a & b 5 ..... Chemistry 1
Military Tactics, 3 .....

Elective, 11 .....
French, a 4 or .....French 1
German, a 4 .....German 1
Principles of Cookery, a 2 b 3.....Home Economics 3
Drawing, b 3 .....Art 14
Business Law, a 2 b 2 .....Commerce 9
College Algebra, a 5 .....Mathematics 8
Shopwork, b 3 .....

Second Semester—

Rhetoric, a 3 .....English 10
Elementary Chemistry, a & b 5 .....Chemistry 2
Military Tactics, 3 .....
Elective, 11 .....
French, a 4 or .....French 2
German, a 4 .....German 2
Drawing, b 3 .....Art 15
Textiles and Principles of Sewing, a 2 b 2 .....
.....Home Economics 11
Shopwork, b 3 .....
Plane and Spherical Trigonometry, a 5....Mathematics 9
Surveying, a & b 2 .....Civil Engineering 1

SOPHOMORE YEAR

First Semester—

English Literature, a 3 .....English 11
Modern History, a 3 .....History 7
Military Tactics, 3 .....
Elective, a & b 14 .....
French, a 4 or .....French 3
German, a 4 .....German 3
And two of the following:
General Botany, a 2 b 3 .....Botany 2
General Zoology, a 2 b 3 .....Zoology 3
Quantitative Chemistry, a & b 5 .....Chemistry 3
General Physics, a 3 b 2 .....Physics 3
Analytic Geometry, a 5 .....Mathematics 11

Second Semester—

English Literature, a 3 .....English 12
Modern History, a 3 .....History 8
Elements of Military Science, a 1 .....Military 1
Military Tactics, 3 .....
Elective, a & b 14 .....
French, a 4 or .....French 4

German, a 4 ..... German 4
And two of the following:
General Botany, a 2 b 3 ..... Botany 3
General Zoology, a 2 b 3 ..... Zoology 4
Volumetric Analysis and Drug Assaying, a & b 5.....
..... Pharmacy 9
General Physics, a 3 b 2 ..... Physics 4
Calculus, a 5 ..... Mathematics 12

JUNIOR YEAR

First Semester—

English Literature, a 3 ..... English 13
American Government, a 3 ..... History 13
Psychology, a 3 ..... Education 1
Elective, a & b 9 .....

Second Semester—

English Literature, a 3 ..... English 14
Political Parties, a 3 ..... History 14
Ethics, a 3 ..... Education 2
Elective, a & b 9 .....

SENIOR YEAR

First Semester—

Economics, a 3 ..... History 15
Geology, a 5 ..... Agronomy 9
Elective, a & b 10 .....

Second Semester—

Sociology, a 3 ..... History 16
General Astronomy, a 3 ..... Mathematics 15
Elective, a & b 12 .....

Electives in Junior and Senior Years in General Science

First Semester—

General Botany, a 2 b 3 ..... Botany 2
Economic Botany, a 1 b 2 ..... Botany 12
Plant Physiology, a 2 b 3 ..... Botany 4
Cytology and Botanical Methods, a & b 5 ..... Botany 8
Quantitative Chemistry, a & b 5 ..... Chemistry 3
Agricultural and Sanitary Analysis, a & b 5..... Chemistry 5
Industrial Chemistry, a 3 ..... Chemistry 7
General Physics, a 3 b 2 ..... Physics 3
Advanced Physics, a 4 b 1 ..... Physics 5

Heat, a 3 b 1 ..... Physics 7
Entomolgy, a 1 b 1 ..... Entomology 3
Economic Entomology, a 1 b 1 ..... Entomology 5
Systematic Entomology, b 2 ..... Entomology 7
Insects and Disease, a 2 ..... Entomology 12
Nature Study, a 3 ..... Entomology 12
Animal Behavior, a 2 ..... Entomology 13
General Zoology, a 2 b 3 ..... Zoology 3
Comparative Anatomy of Vertebrates, a & b 3 ..... Zoology 7
Histology, a & b 5 ..... Zoology 9
Literary Interpretation, a 3 ..... Public Speaking 1
Extempore Speaking, a 2 ..... Public Speaking 3
Extempore Speaking, a 1 ..... Public Speaking 5
Argumentation and Debate, a 2 ..... Public Speaking 7
Public Address, a 2 ..... Public Speaking 9
Elementary Public Speaking, a 4 ..... Public Speaking 11
Embryology, a & b 5 ..... Zoology 11
Bacteriology, a & b 5 ..... Veterinary 6
Analytic Geometry, a 5 ..... Mathematics 11
Analytic Mechanics, a 5 ..... Mathematics 13
French, a 3 ..... French 5
German, a 3 ..... German 5
English Literature, a 3 ..... English 15
The English Novel, a 3 ..... English 19
Biblical Literature, a 2 ..... English 21
American History, a 3 ..... History 9
History of the West, a 2 ..... History 19
History of Education, a 3 ..... Education 3
School Organization and Administration, a 3 ..... Education 4
Principles of Teaching, a 3 ..... Education 5
The Rural Community, a 2 ..... History 17
Organic Chemistry, a 3 b 2 ..... Chemistry 9
Theory and Practice of Design, a & b 2 ..... Art 4
Art History, a 2 ..... Art 6
Theory of Interpretation and Musical Forms, a 2 .... Music 6
History of Music, a 3 ..... Music 7
Military Law, a 1 ..... Military 2
Field Service Regulations & Military Field Engineering, a 1 ..... Military 4

Second Semester—

General Botany, a 2 b 3 ..... Botany 3
Taxonomy, a & b 5 ..... Botany 7
Cytology and Botanical Methods, a 1 b 4 ..... Botany 9

Volumetric Analysis and Drug Assaying, a & b 5	Pharmacy	9
Chemistry of Foods and Nutrition, a & b 5	Chemistry	4
Agricultural Chemistry, a 3	Chemistry	6
General Physics, a 3 b 2	Physics	4
Advanced Physics, a 4 b 1	Physics	6
Light, a 3 b 1	Physics	8
Entomology, a 1 b 2	Entomology	4
Economic Entomology, a 1 b 1	Entomology	6
Systematic Entomology, b 2	Entomology	8
Bird Study, a & b 2	Entomology	11
General Zoology, a 2 b 3	Zoology	3
Comparative Anatomy of Vertebrates, a & b 5	Zoology	8
Advanced Mycology, a & b 5	Botany	6
Animal Behavior, a 2	Entomology	13
Organic Chemistry, a 3 b 2	Chemistry	10
Histology, a & b 5	Zoology	10
Embryology, a & b 5	Zoology	12
Heredity, a 2 b 1	Botany	10
Calculus, a 5	Mathematics	12
Analytic Mechanics, a 3	Mathematics	14
Literary Interpretation, a 3	Public Speaking	2
Extempore Speaking, a 2	Public Speaking	4
Extempore Speaking, a 1	Public Speaking	6
The Speech for Special Occasions, a 2	Public Speaking	8
Public Address, a 2	Public Speaking	10
Elementary Public Speaking, a 4	Public Speaking	12
French, a 3	French	6
German, a 3	German	6
American History, a 3	History	10
History of the West, a 2	History	20
Principles of Education, a 3	Education	7
Psychology of Child Development, a 3	Education	6
Observation and Practice, a 3	Education	8
Theory and Practice of Design, a & b 2	Art	5
Art History, a 2	Art	7
English Literature, a 3	English	16
English Novel, a 3	English	20
Biblical Literature, a 2	English	22
Theory of Interpretation and Musical Forms, a 2	Music	9
History of Music, a 3	Music	10
International Law, a 1	Military	3
Applied Tactics, a 1	Military	5
Meteorology, a 2 b 1	Agronomy	10
Agricultural Economics, a 3	History	18

Two Year Course in Pharmacy

FIRST YEAR

First Semester—

Elementary Chemistry, a & b 5	Chemistry	1
General Botany, a 2 b 3	Botany	2
Anatomical Methods, a 3 b 2	Zoology	5
Pharmacy Latin, a 5	Pharmacy	1
Military Tactics, 3		

Second Semester—

Elementary Chemistry, a & b 5	Chemistry	2
General Botany, a 2 b 3	Botany	3
Anatomical Methods and Physiology, a 3 b 2	Zoology	6
Pharmacognosy, a & b 5	Botany	1
Military Tactics, 3		

SECOND YEAR

First Semester—

Materia Medica, a 5	Pharmacy	2
Pharmacy, a 5	Pharmacy	4
Volumetric Analysis and Drug Assaying, b 5	Pharmacy	9
Pharmacy Laboratory, b 3	Pharmacy	5
Pharmaceutical Arithmetic, a 2	Pharmacy	6
Military Tactics, 3		

Second Semester—

Materia Medical, a 5	Pharmacy	3
Pharmacy, a 5	Pharmacy	7
Organic Chemistry, a 3 b 2	Chemistry	11
Pharmacy Laboratory, b 5	Pharmacy	8
Military Tactics, 3		

NOTE—Students who have received the degree of Pharmacy Graduate may receive the degree of Bachelor of Science upon completing sufficient work in addition to the two-year course to make one hundred and fifty hours of credit.

Of the additional work the following courses are required:

Rhetoric	6 hours
English Literature	6 hours
History	6 hours
Modern Language	16 hours

and thirty-six hours elected in physics, chemistry, botany, bacteriology, zoology, or histology. Students electing physics should take trigonometry.

Departments and Work

The Agricultural Experiment Station

JAMES W. WILSON, Director.

Under the provisions of the Hatch Act of March 2, 1887, and the Adams Act of March 20, 1906, the state now receives annually $30,000 from the treasury of the United States for the maintenance of an experiment station. By an act of the legislature this institution was made a part of the South Dakota Agricultural College. Its object is to investigate along agricultural lines, publish the results in bulletin form and distribute them to the residents of the state for their information and benefit. It consists of five divisions, namely; agronomy, animal husbandry, dairy, horticulture and chemistry.

Each of these divisions is in charge of an expert who is also professor of the same subject in the College.

About sixty acres of the college farm are set aside for experiments in crop rotation and testing varieties of grains.

Another tract of sixty acres is utilized for experiments along horticultural lines, where trees, shrubs and vines are grown in profusion. Adaptation of grains, grasses, forage plants, fruits, trees, shrubs and vegetables for the Northwest is being carried on in co-operation with the United States Department of Agriculture and as a result many valuable varieties have been introduced which probably would not otherwise have reached us.

Each division is provided by the state with the proper facilities to conduct investigations, and at least four bulletins are published annually, which are free to residents of the state. Inquiries pertaining to the various agricultural interests are answered promptly. The regular bulletin mailing list of the station numbers over 19,000 names.

All communications to this department should be addressed to the Director.

Department of Animal Husbandry

PROFESSOR WILSON; ASSOCIATE PROFESSOR THOMPSON; MR. CRAMER.

It is generally admitted that live-stock farming is the basis for an intensive agriculture and that it, as well as good farming, must be practiced if the fertility of the soil is to be maintained.

Work in this department gives the student a practical and scientific knowledge of animal husbandry as applied to South Dakota conditions. The College herds and flocks include representatives of eighteen of the leading breeds of domestic animals. These are all used for class and demonstration purposes. Men having completed this course are well equipped to manage live-stock farms and to judge stock shows and to teach.

The following subjects are offered by this department:

1. **Stock Judging.**—Two recitation and two laboratory periods a week, first semester; required in the freshman year of the Agricultural Course. Study and practice in judging of horses, cattle sheep and swine. Special attention is given to the use of score cards both for market and breeding animals.

Text: Craig's Judging Live Stock.

2. **Breeds of Live Stock.**—Three recitations a week, second semester; required in the freshman year of the Agricultural Course. A study of the various breeds, their origin, development, characteristics and adaptability as to use and locality; work accomplished by the noted breeders of the past and present day reviewed.

Text: Plum's Types and Breeds of Farm Animals.

3. **Advanced Stock Judging.**—Two periods a week, first semester; required in the senior year of the animal husbandry group, Agricultural Course; prerequisite, Animal Hunsbandry 1 and 2.

Particular attention is given to the placing of animals and the giving of reasons why they are so placed. This course includes the judging of market, breeding and show animals.

4. **Principles of Animal Breeding.**—Three recitations a week, second semester; required in the junior or senior year of the animal husbandry and the dairy husbandry groups, Agricultural Course; prerequisite, Animal Husbandry 2. This course deals with the laws

that govern reproduction and the development of animals, and the different systems employed in producing both market and breeding animals; study of blood lines and pedigrees.

Text: Davenport's Principles of Breeding.

5. **Animal Nutrition.**—Three recitations a week, second semester; required in the junior year of the animal husbandry group, Agricultural Course; prerequisite, Animal Husbandry 1 and 2, and Chemistry 2. This subject deals with the physical and chemical characteristics of the various feeding stuffs and their relation to practical feeding operations.

6. **Stock Feeding.**—Three recitations a week, first semester; required in the senior year of the animal husbandry group, Agricultural Course; prerequisite, Animal Husbandry 5. A study of the feeding of the various classes of live stock, compounding of balanced rations, results of experimental and practical feeding investigations.

Text: Henry's Feeds and Feeding.

7. **Live Stock Management.**—Two lectures a week, second semester; required in the senior year of the animal husbandry group of the Agricultural Course; prerequisites, Animal Husbandry, 1, 2 and 6. This course will consist of lectures pertaining to the proper locations for live stock farms, the kind and arrangement of buildings, founding and management of herds and flocks, capital required, methods of selling, etc.

8. **Horse Production.**—One recitation a week, first semester; elective in junior and senior years of the Agricultural Course; prerequisites, Animal Husbandry 1 and 3. A study of the market classes of horses, their production and use; care and management of breeding horses and colts; fitting horses for sale and show; practical methods of handling and training horses. Lectures, practical demonstration and assigned reading.

9. **Beef Production.**—One recitation a week, first semester; elective in junior and senior years of the Agricultural Course; prerequisites, Animal Husbandry 1 and 3. Practical method of beef production; feeding for market, fitting for show and general care and management of same. Lectures, practical demonstrations and assigned readings.

10. **Swine Production.**—One recitation a week, first semester; elective in junior and senior years of Agricultural Course; prerequisites Animal Husbandry 1 and 3. A course dealing with the care and management of breeding hogs; fattening and finishing market hogs; pasture crops and grain crops as adapted to hog rais-

ing; immunizing hogs against cholera and a practical discussion of the merits of more common breeds.

11. **Sheep Production.**—One recitation a week, first semester; elective in junior and senior years of Agricultural Course; prerequisites, Animal Husbandry 1 and 3. Best systems of sheep farming; general care and management of the breeding flock; production of spring lambs; practical demonstrations in docking, shearing and castrating. Lectures and assigned reading.

12. **Poultry Culture.**—Two lectures a week, first semester. A general course dealing with housing, yarding, marketing and the care of breeding and growing poultry.

13. **Poultry Feeding.**—One lecture a week, first semester. This course should be preceded or accompanied by Poultry Culture. A course dealing with the feeding of breeding flocks; laying flocks; fattening for market and home use, and a general discussion of feeds as adapted to poultry.

14. **Poultry Breeding.**—Two lectures a week, second semester. This course should be preceded or accompanied by Poultry Culture. A study of the mating systems used in producing show and utility birds; the mechanism, operation and management of incubators and brooders.

Department of Dairy Husbandry

PROFESSOR LARSEN; ASSOCIATE PROFESSOR FULLER; MR. HUNGERFORD; MR. GREGORY; MR. CLIFFORD.

This department offers three separate courses: (1) The Four-Year Agricultural Course, the last one and a half years of which are devoted chiefly to special dairy studies. (2) The Three-Months Dairy Course. (3) The one-week course for cream testers.

The first course has been outlined with a special view of fitting young men to become teachers and investigators of dairying in public schools, agricultural colleges and experiment stations, inspectors of creameries and dairy products in municipal, state and government service and superintendents of large creameries and dairy farms.

The second course is given with a view of training men

to become successful operators of creameries, cheese factories, central plants and dairy farms.

The one-week course is given in December in order that examinations for licenses may be taken before January first.

The demand for good men properly trained along dairy lines is great. Compensation for dairy and creamery work is good. Worthy students can depend upon the co-operation of this department in securing suitable work.

The Dairy Husbandry Department operates on a commercial basis a well equipped creamery and cheese factory throughout the year. The department occupies a two-story brick building. On the first floor are the engine room, creamery rooms with full equipment for butter, cheese and ice cream making, refrigerating rooms, locker and reading room, and a large laboratory used for instructional purposes. On the second floor are located class rooms, offices, dairy bacteriology laboratory, and chemistry research laboratory.

The dairy herd, which consists of representatives of the principal dairy breeds, affords an excellent opportunity to become acquainted with dairy type. The dairy barn is large and well equipped. Milking machines are in daily use, thus affording students opportunity to acquire practical knowledge regarding machine milking.

Experiments relating to feeding, breeding and care of dairy stock and the manufacture of dairy products are in progress at all times. Students may have the advantage of keeping in touch with these experiments, note manner of outlining and executing investigational work, and profit from results. Advanced worthy students may arrange to assist in some of this work.

The following work is offered:

1. **Farm Dairying.**—Two lectures and one laboratory period a week, second semester; required in the freshman year of the four-year Agricultural Course, and with some modification during the first year of the School of Agriculture.

This subject comprises a study of the economic production, secretion and composition of milk; of the comparative economy in dis-

posing of and utilizing milk for various purposes on the farm, of testing milk and its products for fat, acid and common adulterations; of the effects of germ and degree of purity on dairy products; of the separating and handling of milk and cream and the manufacture of butter and cheese on the farm.

2. **Inspection and Testing of Dairy Products.**—Four lectures and laboratory periods a week, first semester; required in the junior year of the dairy group, Agricultural Course.

Those taking this course should have had at least one term's work in chemistry. It embodies a thorough study of the Babcock test for fat, of the lactometer and its application, of the tests for determining the acidity of dairy products, of the various tests for moisture in butter, of the influence and detection of different preservatives and adulterations, and a study of the various pure dairy food standards.

3. **Dairy Bacteriology.**—Two lectures and three laboratory periods a week, second semester; required in the senior year of the dairy group, Agricultural Course.

In this course are taught bacteriological principles as related to dairying, contamination of milk, fermentations of milk, and their control, relation of disease bacteria to milk, preservation of milk for commercial purposes, bacteria as related to the manufacture of butter, and bacteria as related to the manufacture of cheese. General bacteriology is a prerequisite study.

4. **Factory Operation (Creamery).**—Three lectures and two laboratory periods a week, first semester; required in the junior year of the Dairy Husbandry group, Agricultural Course; prerequisite, Dairy 2.

A thorough study of the receiving, sampling and separation of milk and cream, the preparation and use of starters, pasteurization and ripening of cream, principles of churning, washing, salting, working, packing and marketing butter. Attention will also be given to the organization, location, construction, drainage, cooling and ventilation of factories and creameries, the economic disposal of factory by-products and various methods of factory refrigeration.

5. **Factory Operation (Cheese).**—Three lectures and two laboratory periods a week, second semester; required in the senior year of the dairy group, Agricultural Course.

This course comprises a study of milk as applied to cheese-making, the manufacture of hard and soft cheese, including the prineiples involved in the setting, cutting, cooking, dipping, milling, salting, pressing, curing and marketing of cheese.

6. **Dairy Management.**—Two lectures and one laboratory period a week, first semester; required in the senior year of the dairy group, Agricultural Course.

The various methods of improving and upbuilding a dairy herd and the advanced judging of dairy stock will be emphasized, methods of weighing, testing and recording feed consumed and milk produced by each cow will be outlined. The history and adaptability of various dairy breeds to different conditions and relation of dairy types to milk producing capacity will be studied. This course will also embody study of the extent to which dairy farming is practiced and under which conditions it is best applicable, of dairy farming as an adjunct to general farming and the arrangement and construction of dairy farm buildings, stalls, yards, etc.

7. **Dairy Technology.**—Two lectures and two laboratory periods a week, second semester; required in the junior year of the dairy group of the Agricultural Course; prerequisite, Chemistry 2 and Dairy 3.

This course treats of the ways in which milk and its products are utilized outside of the scope ordinarily embraced under dairying. It comprises such subjects as value of milk as a food, the preparation of certified, modified, standardized, fermented and condensed milk, the manufacture of casein, milk ivory, milk sugar, renovated butter and oleomargarine.

8. **Dairy Research.**—Second semester, senior year; elective in the junior or senior year. A study of various views held by different authorities on certain important dairy subjects, a digest of recent dairy work of the experiment stations, and of comparative dairying as practiced in leading countries. A reading knowledge of German is recommended.

9. **Dairy Practice, Elective.**—The college has a commercial creamery and cheese factory in operation every day during the year except Sunday. Students who specialize in dairying and need practical experience should make it a point to take this course. Arrangements can be made to do this practical work at almost any time during the year. Vacation time is recommended.

10. **Domestic Dairying.**—One lecture and one laboratory period a week; elective. This course includes lectures and laboratory work on such phases of dairying as will be of greatest interest and value to ladies and home life, such as properties of milk, the various uses of milk, and each of its component parts for the home as well as for commercial purposes, and the relation of germs to quality of dairy products and to consumers of dairy products. The detection of adul-

teration of milk and dairy products, the use of the Babcock test for fat, effects of different ferments on milk and dairy products, and the making of cheese and butter on the farm will be demonstrated in the college creamery laboratory.

11. **Advanced Inspection of Dairy Products.**—Three lectures and two laboratory periods a week, first semester, senior year; prerequisites, Dairy 2, Chemistry 3.

This course takes up a study of the properties of the component parts of milk and its products including abnormal milks, synthetic milk, condensed and powdered milks, butter from neutralized cream, oleomargarine and leading types of cheese.

Department of Veterinary Medicine

DR. LIPP.

Part of the work given in this department is planned to correlate with other work given in the Department of Animal Husbandry. Other work is of such character as will be of very material aid to the educated farmer in helping him to realize the seriousness of the infectious and contagious diseases and to co-operate with local and state authorities for their control and eradication.

Some of the commoner ailments of farm animals are considered especially with regard to their prevention. None of the work is planned to prepare the student to treat diseases of farm animals. Barnyard hygiene is given considerable attention along with disease prevention.

1. **Veterinary Anatomy.**—Two recitations per week, second semester; required in the freshman year of the Agricultural Course. The lectures consist of a brief study of the anatomy of the front limb of the horse, and are planned to give the student an introduction into anatomical study, to prepare him for better work in stock judging, and also for the courses in anatomy of conformation and soundness, and animal mechanics respectively. A somewhat detailed study of the structure of the foot, and various forms of lameness are included since they will be of value in all matters relating to horseshoeing and lameness in farm horses.

2. **Veterinary Medicine.**—Three lectures per week, first semester; required in the senior year of th Animal Husbandry group, Agricultural Course. This course deals with the cause, spread,

symptoms, diagnosis and prevention of the common infectious and contagious diseases of farm animals.

No attempt is made to develop proficiency in diagnosis, but rather to aid the student to understand the contagiousness of the diseases studied, and teach him to give intelligent co-operation to local and state authorities.

3. **Anatomy of Conformation and Soundness.**—Two lectures per week, first semester; required in the junior year. It is planned to follow Veterinary Anatomy and correlate with it, also to be of further help to the student judging live stock. The anatomical differences in conformation and type are considered in detail, special attention being given to bones and joints.

4. **Animal Mechanics.**—Two lectures per week; required in the junior year, first semester. This course takes up a consideration of the animal body as a machine. The action of the bones as levers is given proper attention, also the use of muscles as power applied to the bony levers is considered fully. The aim of this course is to acquaint the student with those principles in physics which are in daily operation in farm animals on the roads and fields of the state.

5. **Stable Hygiene and Disease Prevention.**—Three lectures per week; required in the senior year, first semester. The course studies the needs of animals for ventilation, the best systems of ventilation, and lack of ventilation as a cause of disease.

Consideration of food and water as causes of disease is also included. Care and sanitation also come in for their full consideration. This course should be of the highest value to every educated stockman.

6. **Physiology of Digestion.**—This course occupies the last half of the second semester, following a course in general and human physiology. The course deals with the processes of digestion and assimilation in horses and cattle. Food is traced from the mouth through the various digestive processes to the tissues of the body. The use of the food within the tissues is then studied and the production of tissue waste. Finally the execretions and their composition are studied.

This course is planned to be of very material aid to the intelligent feeding of live stock. (See Zoology 4).

Agronomy Department

PROFESSOR HUME; ASSOCIATE PROFESSOR HUTTON; MR. CHAMPLIN; MR. LOOMIS; MR. SLOAN.

The Agronomy Department is the department of soils and crops. To help students apply the principles of science to crop production on the farms of South Dakota is the essential purpose of the courses offered.

What is soil in South Dakota, or on some farm within the state? The student may learn to outline soil areas, to analyze soils, to observe field experiments, and answer the question for himself.

What crops will grow on South Dakota soil areas, and how may the growing of them be made most profitable to the man who does the work? A study of the results of experiments will answer the questions for the student. It is attempted to give the student in agronomy that accurate knowledge of conditions which is necessary to success in farming.

The courses offered are fundamental, practical, scientific. They are designed for South Dakota farmers. They may be taken with profit by prospective teachers of agriculture, or experiment station workers.

1. **Farm Crops.**—Two recitations and three laboratory periods per week, first semester; required in the freshman year of the Agricultural Course. Grain judging and seed testing. Score card judging of wheat, barley, oats, emmer, potatoes, corn and other crops. Weeds and weed seeds. Classification, harvesting, grading, cleaning, storage and care of crops. Open to all college students, without prerequisite.

2. **Farm Crops.**—Three recitation hours and two laboratory periods per week, second semester; required in the junior year of the agronomy group, Agricultural Course; prerequisite, Agronomy 1, or Botany 1, and one year of college work. Special crops adapted to South Dakota conditions; methods, cost and profit in production; practical and scientific arrangement of crop rotations with a view to better crops; the relation of the crops produced in South Dakota to the world supply. As much attention as possible is given to the improvement of crops by selection and breeding.

3. **Advanced Farm Crops.**—Elective in the junior or senior year; five to ten credits; prerequisite, Agronomy2 and two years of college work. Special problems for advanced students. The advanced student may become interested in some particular line of investigation, as for instance, a problem in corn breeding, the effect of storing of seed of corn or other crops upon germination and growth, the effect of various methods of cultivation, and problems of crop improvement. Such work may imply a study of previous experiments, cropping experiments in green house or on the field. The student will submit a final report or thesis. Time and number of hours to be arranged with instructor in charge.

4. **Soil Physics and Management.**—Five lecture and laboratory periods a week, first semester; required in the junior year of the Agricultural Course; prerequisites, Physics 1 and 2, Chemistry 1 and 2. This course deals with the origin and development of the soil under different climatic conditions; classification of soils upon several bases; texture, porosity, specific gravity, plasticity, capillarity, granulation of soils; the soil as a reservoir for water; the movement and control of soil water; irrigation and drainage; the alkali problem; aeration of the soil, its relation to soil texture and plant growth; soil temperature; the physical effect of manures upon the soil; soil erosion by wind and running water—blowing and washing—and their control; the practical application of the foregoing to methods of tillage; crop rotations and the application of green and farm manures in the management of different types of soil. The laboratory work includes a careful study of the physical properties of the soil through observation and practice; soils are also studied under field and green house conditions.

5. **Soil Fertility.**—Five lecture and laboratory periods a week, second semester; required in the junior year of the Agricultural Course; prerequisite, Agronomy 1 and 4, and Chemistry 3. The relation of the fertility content of the soil to crop yields; effect of supplying various elements of fertility; effects of different rotations and systems of farming in relation to permanent agriculture; a study of a system of agriculture in relation to permanent agriculture; a study of a system of agriculture adapted to South Dakota conditions. The laboratory work includes the analysis of manures and fertilizers and the determination of their agricultural and commercial values; the analysis of various farm products; the analysis of a soil, preferably from the student's home farm, to determine the fertility content. These anaylses serve as the basis for devising a system of permanent agriculture for the student's home farm.

6. **Advanced Soil Physics.**—Five lecture and laboratory periods a week, first semester; elective in the senior year; prerequisite, Agronomy 4. This course is designed for those students who wish to continue the work in Soil Physics begun in Agronomy 4. A study in the field of the effects of discing, harrowing, rolling, subsoiling, frequency and depth of cultivation with reference to conservation of soil moisture. The student may select a soil in which he is interested and make a complete physical analysis thereof; he may make a careful study of the movement of the water therein and its effect upon the growth of plants; he may choose a special irrigation or drainage problem in which he is interested; the results of the work are summarized in a final report or thesis. Students who elect this course are advised to signify their intention of so doing at the end of the college year, so that materials may be collected during the summer, and observations reported.

7. **Advanced Soil Fertility.**—Five lecture and laboratory periods a week, second semester; elective in the senior year; prerequisites, Agronomy 4 and 5. This course is a continuation of Agronomy 5 and permits the student to study in detail a special soil in which he may be interested or to pursue a special problem. The work may include pot culture work in the green house; analysis of the soil used in the pots; application of various fertility elements and their relation to the management of the soil; the study of the micro-organisms of the soil in relation to the preparation and availability of plant food, preparation of culture media, cultures from soil suspensions, preparation and study of a few pure cultures, ammonification, nitrification, nitrogen fixation, legume bacteria and conditions favorable to their growth, inoculation; results of bacterial action determined by quantitative analysis; reading of bulletins, books, etc., and the preparation of a bibliography. The results of the study will be submitted in a final report or thesis.

8. **Soils.**—Two hours per week, second semester; elective in the senior year. A consideration of the effects of the change in water contents of soils through irrigation and drainage; the effect upon the physical condition of the soil and upon its productivity, special attention given to the problems of irrigation and drainage of unreclaimed lands in South Dakota. Lectures, reading, field observations.

9. **A Series of Lectures on Various Subjects Pertaining to Soils and Crops.**—Given by request of the Department of Dairy Husbandry for the students of the three months Creamery Course.

10. **Earth Science; Geology.**—Three recitations and two laboratory periods a week, first semester; required in the senior year of the General Science and Civil Engineering Courses and in the Agronomy group of the Agricultural Course. A course in general geology with the greater emphasis placed upon the physical division of the subject. The geology of South Dakota in relation to soils, water supplies and mineral wealth is given special attention. Collections of rocks, minerals, typical fossils, physiographic and geologic models, lantern slides, charts and maps are available for laboratory work and reference.

11. **Earth Science; Meteorology.**—Two recitations and one laboratory period a week, second semester; elective in the junior year or senior year. A practical course dealing with the laws controlling the movements of the atmosphere, the study of climatological and weather factors, with special attention to conditions in the Unied States, the climate and weather of South Dakota in relation to her various economic interests, weather maps and forecasts.

Graduate Courses.—A limited number of courses of study may be arranged for students who have already received the Bachelor's Degree and who desire to pursue some line of investigational work. Such students should consult with the professor in charge. Problems relating to systems of farming and soil fertility, mechanical composition of soils, drainage water, variation in type as related to crop yields, influence of selection and breeding upon yield of special crops may be included in a list of possible studies for graduates.

Department of Horticulture and Forestry

PROFESSOR HANSEN; MR. STOLTENBERG.

In this department the work is given from two standpoints. In one, especially in the study of genetics, emphasis is placed upon the general philosophy of the subject as being essential to a general education. The claim is made that some of the principles of horticulture and forestry are essential to any well rounded education and to the best preparation for citizenship. The second standpoint is that of students intending to make a life work of horticulture or forestry, either as a business or a profession. Throughout the course full use is made of the student's attainment in the various science under-

lying these subjects. The variation of plants and the principles and methods of their development under the hand of man are considered, as well as their propagation and cultivation.

Field and laboratory exercises emphasize the lectures and recitations of the class room. The habit of independent investigation and close observation is encouraged by requiring written reports of outdoor excursions or demonstrations. Excellent facilities for practical illustration are offered by the ninety acres of experiment station horticulture grounds and college campus. In this domain are included orchards, forestry plantations, nurseries, vegetable gardens, small fruit plantations, flower borders and a collection of ornamental plants. Special attention is paid to the breeding of hardy fruits adapted to prairie conditions and the work in this line is now second to none in extent. The department greenhouses consist of two sections, one for the general floriculture work and the other for fruit-breeding experiments. In addition, the horticultural buildings contain class rooms, laboratory, grafting and potting rooms and storage cellars.

Special stress is placed upon practical work in the grafting room.

The following work is offered:

1-2. **General Horticulture.**—One laboratory period a week throughout the year; required in the sophomore year of the Agricultural Course. An introduction to the various divisions of horticultural work, especially the propagation of plants and the best western nursery methods of planting, pruning and cultivation. Special attention is given to the grafting and budding of fruit trees. Elementary exercises in the identification and description of fruits and the origination of new varieties. Students are required in their laboratory notes to give the reasons why as well as the methods.

3. **Floriculture and Market Gardening.**—One recitation and laboratory period a week, second semester; required in the junior year of the horticulture group, Agricultural Course.

The commercial and amateur cultivation of flowers and vegetables under glass and in the open air; lectures, demonstrations, and text book work.

4. **Forestry.**—Two lectures or recitations a week, first semester; required in the senior year of the horticulture group, Agricultural Course.

Principles of forestry; the influence of forests on climate; timber planting on the prairies; European forestry methods as modified by prairie conditions; shelter belts; the propagation, cultivation, characteristics and use of forest trees; lectures and demonstrations.

Texts: Pinchot's Primer of Forestry; Green's Forestry in Minnesota; Proceedings of the American Forestry Congress.

5. **Systematic Pomology.**—One laboratory exercise a week, first semester; required in the junior year of the horticulture group, Agricultural Course.

Principles of fruit culture with special reference to prairie conditions; exercises in the identification and description of fruits. Texts: American Horticultural Manual, Bailey's Principles of Fruit Culture.

6. **Landscape Gardening.**—Two laboratory periods a week, second semester; required in the senior year of the horticulture group Agricultural Course.

The philosophy of the beautiful in its various modes of expression; gardening as one of the fine arts; historic developments of the ancient or geometric and the modern or natural styles; the best ornamental trees, shrubs, plants and hedges. Special attention is paid to the development of originality in the planning and laying out of country and city home grounds, parks and school grounds; lectures; text-book, and references.

7. **Heredity.**—Three recitations a week, second semester; required in the junior year of the horticultural group, Agricultural Course.

This subject is especially recommended to students of the sciences relating to plants and animals, and also to students of general history and sociology. The evolution of plants and animals under the hand of man and in the state of nature; the philosophy of artificial evolution or the modification and amelioration of plants and animals by environment, selection and hybridization; the relation of genetics to society; recent theories and work in plant-breeding.

Texts: Darwin's Animals and Plants under Domestication; De Vries' Species and Varieties, their Origin by Mutation; Bailey's Plant-Breeding and Survival of the Unlike; Reports of International

Conferences on Genetics; Reports of the U. S. Department of Agriculture.

8. **Plant Propagation.**—Practical exercises in tree, shrub and plant propagation for students in the short agricultural course.

9. **Floriculture and Home Gardening.**—Instruction in home gardening for the students in the short winter course in domestic economy and agriculture; text-books; practical demonstrations and exercises.

10. **Forestry and Landscape Gardening.**—Lectures and exercises in the leading essentials of tree culture and the planting of home grounds for students in the short winter courses in agriculture.

Department of Home Economics

MISS FROMME; MRS. PRUSIA; MISS HARTGERING; MISS WOOD.

The purpose of the department is to provide training along the lines of intelligent house-keeping and home-making. The location for carrying on the work is most favorable, being the entire third floor of the North Building, where there is abundance of room, air and light. The rooms consist of a large kitchen, a dining-room, a sewing-room and a recitation room provided with the equipment necessary for carrying on the work. Through the general library, opportunity is given for the use of the newest and best literature relating to the subject.

The work offered is intended to impart knowledge, develop skill in execution, stimulate self-direction and broaden and strengthen the individual. A good foundation of pure science is laid for all applied science while handwork, including sewing, gives opportunity for artistic expression the principles of which are gained through the regular art training.

The general subjects of the department as as follows:

For Home Economics 1 and 2, see the preparatory department.

3. **Principles of Cookery.**—Two recitations and three laboratory periods a week, first semester; required in the freshman year of the Home Economics Course; elective in the freshman year of General Science Course; freshman or higher classification necessary.

The work covers the study of food in source, composition, nutritive value, preparation and serving with training in care of kitchen and utensils.

4. **Serving and Dietetics.**—One recitation and two laboratory periods a week, second semester; required in the junior year of the four year Home Economics Course; elective in the junior year of General Science Course in place of Physics 4; prerequisite, Botany 2, Chemistry 3, Zoology 3 and Home Economics 1. The work includes preparation of menus with special reference to balanced diet, cost, cooking and serving of meals and calculation of dietaries.

5. **Special Problems in Cookery.**—One recitation and two laboratory periods a week, second semester; required in the senior year of the four year Home Economics Course; prerequisite, Botany 2, Chemistry 3, Zoology 3 and Home Economics 2.

The course covers diet for children and invalids and other advanced work in dietetics.

6. **Sanitation and Hygiene.**—Three recitation periods a week, first semester; required in the senior year of the Home Economics Course; elective, together with Home Economics 6, in the junior year of the General Science Course in place of Physics 3; prerequisite, Chemistry 2, Botany 2 and Zoology 2. The course includes consideration of municipal and rural problems in sanitation, the care and handling of food in the market and in the home, the lighting, heating, ventilation, plumbing and general care of the house.

7. **Home Nursing.**—Three recitation periods a week, first semester; required in the junior year of the four year Home Economics Course. Senior classification or special advanced standing necessary. The work covers the general care of the sick, directions for emergencies and consideration of some common diseases.

8. **The House and Market.**—Three recitations a week; required in the first semester of the senior year of the four year Home Economics Course; elective, together with Home Economics 4, in place of Physics 3, in junior year of the General Science Course. The work embraces construction, furnishing and general care, including the cost of necessary articles, purchase and care of food, the preparation of marketing lists and a study of accounts.

10. **Textiles and Principles of Sewing.**—Two lecture and two laboratory periods a week, second semester; required in the freshman year of the Home Economics Course; elective in the freshman year of the General Science Course. The course covers the making of simple and useful articles in which are incorporated the stitches

necessary for garment making; the making of a set of undergarments is also required. A study is made of the fabrics used in such work along the lines of source, manufacture, general characteristics and qualities and adaptations to specific uses.

11. **Dressmaking.**—One recitation and two laboratory periods a week, first semester; required in the sophomore year of the Home Economics Course; prerequisite, Home Economics 9. The work includes drafting, cutting, fitting and making of a shirt-waist suit. Supplementary work, to meet individual needs, may be required.

12. **Advanced Dressmaking.**—Two recitations and one laboratory period a week, second semester; required in the junior year of the Home Economics Course; prerequisite, Home Economics 10 and 11. The course covers the making of a fitted and lined costume and such other work as seems best for the individual.

Department of Mechanical Engineering

PROFESSOR SOLBERG; PROFESSOR COOK; MR. BONELL; MR. STEFFINS.

The object of the work offered is to give the students a thorough training in the theoretical principles underlying the science of mechanics and machines and at the same time to enable them to become particularly familiar with some of the numerous applications of these principles which are of such inestimable value to the human race.

The instruction is both theoretical and practical. The usual methods of text-book study and lectures are employed, but the student is required to put into practice, as far as possible, the instruction he receives. Hence the work of the class-room is supplemented and practically exemplified by practice in shops. The student not only studies the theories of constructing and operating machinery, but in the drawing room he designs, and in the shop he constructs and operates such machines. It is believed that those who complete this course will be able to fill responsible positions in manufacturing establishments.

The department is located in the Engineering Building. The workshops are supplied with a large variety and quantity

of tools. They are furnished with twenty-five sets of carpenter tools and with eight wood turning and one pattern maker's lathe, a scroll saw, a combination circular saw and a twenty-inch planer. There is also a variety of special tools for wood working.

The machine shop is furnished with a large number of engine lathes of different sizes, a universal milling machine, shaper, planer, tool grinder, drill press, emery wheels and a great variety of hand tools. The machinery is driven by a 50-horse power steam engine.

The Experimental Engineering Laboratory is equipped with a 100,000 pound vertical screw testing machine, for making tensile and compressive tests of the various materials of construction; an automatic shot cement briquette testing machine; a gas engine; a 10 by 10 steam engine; an 8 by 10 steam engine; a 5 by 7 steam engine; and there are also available for this work a 12 by 14 steam engine and two 48 by 16 horizontal tubular boilers. A calorimeter for determing the heat values of gases; a calorimeter for making British thermal unit tests of coal, and an apparatus for flue gas analysis are also used in this work.

The laboratory also possesses a large amount of small apparatus such as indicators, planimeters, steam gauges, thermometers, etc., and a complete outfit for making tests of sand, cement and concrete.

Work in architectural drawing and designing is offered. Additional work along this line will be given to students who desire it.

A number of pictures, drawings, and illustrative material has been recently added to the equipment through the liberality of manufacturers and friends of the College.

The following work is offered:

For Mechanical Engineering 1 and 2, see the preparatory department.

3. **Machine Shop.**—Three laboratory periods a week, second semester; required in the freshman year of the three Engineering

Courses. Includes a study of the materials used in machine work; shop sketching; methods of laying out work; exercises in pipe fitting, chipping, filing, scraping, belt lacing, shaft aligning, babbiting, riveting, soldering, hand and ratchet drilling; and the elementary principles of machine work.

4. **Machine Shop.**—Five laboratory periods a week, first semester; required in the sophomore year of the Mechanical and Electrical Engineering Courses. Includes a study of the principles and methods of machine work; problems involving the use of the various machine tools, as the lathe, planer, shaper, milling machine, drill grinder, drill press, etc. Regular text book and class work supplements the actual work in the shop during both semesters of machine shop. Prerequisite, Machine Shop 3.

5. **Mechanical Drawing.**—Five laboratory periods a week, first semester; required in the freshman year of the three engineering courss. Instrumental, geometrical problems and parts of machines. This work is offered during the entire year, and at hours convenient to teachers and students.

6. **Architectural Drawing.**—Three times a week, first or second semester; required in senior year of the horticultural group, Agricultural Course. Rendered drawings of simple buildings, examples of various orders, giving facility in draughtmanship, familiarizing students with principles.

6a. **Architectural Design.**—Three times a week, first semester; elective. Principles of planning introduced in practical problems, exercises in composition and details.

6b. **Perspective.**—Five times a week, first or second semester; elective.

7. **Descriptive Geometry.**—One recitation and laboratory period a week, second semester; required in the sophomore year of the three Engineering Courses; prerequisite, plane geometry. Instruction in methods of representing by drawing all geometrical magnitudes and solution of problems relating to these magnitudes in space.

8. **Machine Design.**—Four laboratory periods a week, second semester; required in the sophomore year of the Engineering Courses. Solution of various problems involving the design of simple parts of the machine.

9. **Machine Design.**—Two laboratory periods a week, first semester; required in the junior year of the Mechanical and Electrical Engineering Courses. Continuation of Mechanical Engineering 8.

10. **Elements of Mechanism.**—Three recitations a week, first semester; required in the junior year of the three Engineering Courses. Elements of machinery, velocity ratios, graphic representation of speed and acceleration; motion transmitting parts, such as gears, belts, cams, screws, link work; automatic feeds, parallel and quick return motions; designing. Text: Wood and Stahl.

11. **Gas Engines and Gas Producers.**—Two recitations a week, second semester; required in the senior year of the Mechanical and Electrical Engineering Courses and in the fifth year of the Civil Engineering Course; prerequisite, Thermodynamics. Study of the theory, design and operation of gas, gasoline and oil engines and of the various types of gas producers.

12. **Steam Engines and Thermodynamics.**—Five recitations a week, second semester; required in the junior year of the three Engineering Courses; prerequisite, Calculus. Study of the modern steam engine, slide valve, and when in combination with independent cut-off valves, link motion and Zeuner diagrams, reciprocating parts and indicator practice; the principles of the theory of heat which are necessary to a study of the various kinds of heat engines; the application of laws of thermodynamics to the steam engine and a study of steam engine economy by entropy temperature analysis and by other graphical methods. Text: Ripper's Steam Engine.

13. **Steam Boilers.**—Two recitations a week, first semester; required in the senior year of the Mechanical and Electrical Engineering Courses; prerequisite, Mechanical Engineering 16. Advantages and disadvantages of using the various forms of boilers, methods of construction, tubes and flues, plates, riveting, bracing, grate and heating surface, gages and feed appliances, setting, care and operation. Text: Peabody's Steam Boilers.

14. **Kinematics.**—Two laboratory periods a week, second semester; required for the fifth year degree in the Mechanical and the Civil Engineering Courses. Geometry of machinery, problems in the design of motion transmitting appliances.

16. **Mechanics of Materials.**—Five recitations a week, second semester; required in the junior year of the three engineering courses; prerequisite, Analytic Mechanics. Study of the strength and elastic properties of the materials of construction and the behavior of and characteristics displayed by these materials when put under stress. Text: Merriam's Mechanics of Materials.

17. **Experimental Engineering.**—Three laboratory periods a week, first semester; required in the senior year of the Mechanical

and Electrical Engineering Courses; prerequisite, Mechanics of Materials. Includes a series of tests of the various materials of construction, such as wood, cast iron, wrought iron, steel, sand, cement and concrete. Also includes the calibration of steam gauges, thermometers, planimeters, and the testing of oils.

18. **Experimental Engineering.**—One laboratory period a week, first semester; required in the senior year of the Civil Engineering Course; prerequisite, Mechanics of Materials. Includes a series of tests of the various materials of construction.

19. **Experimental Engineering.**—Five laboratory periods a week, second semester; required in the senior year of the Mechanical and Electrical Engineering Courses. Includes a complete series of tests of the heating values of various coals; use of the steam engine indicator, throttling and separating calorimeters, dynamometers and Prony brakes; and complete efficiency tests of engines and boilers in actual operation. It is the endeavor in this work to make each student thoroughly familiar with the construction and operation of steam engines, steam boilers, gas engines, and the many attachments and auxiliaries necessary for their efficient operation.

20. **Experimental Engineering.**—Two laboratory periods a week, second semester; required in the senior year of the Civil Engineering Course. Includes laboratory investigations of various problems in concrete work.

21. **Engineering Design.**—Five laboratory periods a week, first semester; required for the fifth year degree in Mechanical Engineering. Solution in the drawing room of some practical problems in design and making working drawings of same.

22. **Engineering Design.**—Five laboratory periods a week, second semester; required in the senior year of the Mechanical Engineering Course. Continuation of Mechanical Engineering 21.

23. **Structural Design.**—Three laboratory periods a week, first semester; required for the fifth year degree in Mechanical Engineering. Design of roofs and buildings for power stations. For students in mechanical and electrical engineering.

24. **Structural Engineering.**—Two laboratory periods a week, second semester; required for the fifth year degree in Mechanical Engineering. Continuation of Mechanical Engineering 23, with special reference to results obtained from Mechanical Engineering 19.

25. **Statics.**—Two recitations a week, first semester; required

for the fifth year degree in Mechanical Engineering. Treated with special reference to the requirements of engineers. Resolution and composition of forces; center of gravity; principles of equilibrium with numerous applications. Graphic as well as algebraic methods are used. The various hurtful resistances to friction are considered, and numerous problems worked out in the drawing room.

26. **Heating and Ventilation.**—Two recitations a week, second semester; required for the fifth year degree in Mechanical Engineering. A study of the principles underlying the design of the various systems of heating and ventilation in common use, including such details as loss of heat from buildings, problems in proportioning ventilating ducts; and the arrangement of systems of piping for steam and hot water. A study is also made of the various mechanical details entering into the installation of private plants and also plants operated from central stations.

27. **Masonry and Foundations.**—Two recitations a week, first semester; required of senior engineering students. A study of cement, concrete and building stone with special reference to their use in walls and foundations; bearing power of soils; design and construction of foundations of various kinds.

28. **Special Problems in Experimental Engineering.**—Two laboratory periods a week, second semester; elective; open to senior engineering students upon approval of head of their department.

29. **Concrete Construction.**—Two laboratory periods a week, first semester; elective; open to junior or senior students in general science and agricultural courses. Will include practical problems in the use of concrete and the testing of concrete materials.

30-31. **Thesis Work.**—Two and three hours a week, first and second semesters; required for the fifth year degree in Mechanical Engineering. At the beginning of the fifth year's work a subject is assigned to each student, which he is to investigate, and on which he is required to prepare a thesis. This work may involve original design, or it may involve an experimental investigation of the action of certain machines or appliances or of the phenomena developed by the action of certain mechanical forces. In the pursuit of this work the student is thrown largely on his own responsibility. He is expected to familiarize himself with the literature on the subject and to study thoroughly the methods involved in the subject selected. The subject chosen should be submitted to the professor in charge not later than November first of the current year.

Department of Civil Engineering

PROFESSOR WILLIS.

The course in Civil Engineering is designed to give a broad education in the general and scientific subjects which form the foundation of all branches of technology; and to give as much special training as time will permit in several of the more important subjects which belong to that branch of technology known as Civil Engineering.

During the freshman and sophomore years the greater part of the time is devoted to the fundamental studies which give both general culture and preparation for the technical work of the following years. The study of Physics, Mathematics, Chemistry and English is carried on; and work in Mechanical Drawing, Machine Shop and Machine Design is given. The theory of Plane and Topographical Surveying accompanied by field work and map drawing is begun in the freshman year and continued in the sophomore year.

During the junior and senior years practically all of the time is devoted to purely engineering subjects, a large portion of which is given by the Civil Engineering Department. These subjects, the time alloted to them, and the methods of treatment have been chosen with care and with due regard to the end in view, which is to graduate men who know how to think correctly for themselves and who are thoroughly prepared to enter any of the several branches of engineering and to make good in the truest sense. These subjects might be considered as falling naturally into three groups or divisions of civil engineering, namely: (1) Municipal Engineering, including the subjects of Surveying, Highway Construction, Hydraulics, Sanitary Engineering and Irrigation—subjects which are as important to the farm, however, as to the municipality; (2) Railroad Engineering and Geodetic Surveying; (3) Structural Engineering and Building Construction, including the subjects of Graphic Statics, Stresses, Structural Details, Structural Design, Bridges, Dams and Reinforced Concrete. A working knowledge of the laws relating to en-

gineering contracts and specifications is of great value to all engineers and a short course in this subject is given.

To aid it in carrying on its work, the department is provided with suitable equipment, which includes transits, levels, plane table, solar attachment, sextant, current meter, planimeter, protractor, rods, tapes and various hand instruments.

Men completing the work of the four-year course in this department are graduated with the degree of Bachelor of Science (B. S.). Those completing the additional fifth year course of study are given the advanced degree of Civil Engineer (C. E.).

A detailed description of each subject offered by the department follows:

1. **Plane Surveying.**—Two periods of recitation and field work per week, second semester; required in the three Engineering Courses and elective in the General Science Course, freshman year. The theory and practice of land surveying, including United States land surveys, computation of areas, dividing land and determining heights and distances. Field work with level and transit in determination of heights and distances and in making surveys of farms. Preparation required: Plane Trigonometry and Mechanical Drawing. Text: Tracy's Plane Surveying.

2. **Plane and Topographical Surveying.**—One recitation and four field and drafting room periods per week, first semester; required in sophomore year of the Civil Engineering Course. Preparation required: Civil Engineering 1. Continuation of Plane Surveying together with the theory and use of the plane table, and of the transit and stadia. Pen topography and detailed field work; the construction of topographic contour maps, leveling, triangulation and adjustment of instruments. Text: Tracy's Plane Surveying.

3. **Graphic Statics.**—Two drafting room periods per week, first semester; required in the junior year of the three Engineering Courses. Preparation required: Mathematics 10 and 11, General Physics 3. Shears and bending moments in beams, center of gravity and moment of inertia of cross sections, analysis of stresses in roof and bridge trusses, mill bents and three hinged arches by graphical methods. Text: Merriman and Jacoby's Roofs and Bridges, Part II.

4. **Highway Construction.**—Two recitations per week, first semester; required in junior or senior year of Civil Engineering

Course; also for the senior year of Mechanical Engineering Course for the year in which the subject is given. The location, construction and maintenance of country highways and city streets. Text: Blanchard and Drowne's Highway Construction. Seniors and juniors take this subject at the same time, and it is given in alternate years only. It will be given in 1915.

5. **Hydraulics.**—Three recitations per week, first semester; required in junior year of the three engineering courses. Preparation required: Mathematics 11 and 12, General Physics 3 and 4. Hydrostatics and Theoretical Hydraulics. The study of flow of water through orifices, tubes, pipes, over weirs, in conduits, canals and rivers; and application to engineering, water power plants and development. Text: Merriman's Hydraulics.

6. **Stresses.**—Four recitations per week, second semester; required in junior year of Civil Engineering Course. Preparation required: Mathematics 13 and Grapic Statics. The theory and computation of stresses in roof and bridge trusses under dead, live and wind loads. Locomotive wheel loads on plate girders and bridge trusses. Text: Merriman and Jacoby's Roofs and Bridges, Part I.

7. **Railroad Surveying.**—One recitation and two field and drafting room periods per week, second semester; required in junior or senior year of Civil Engineering Course. Preparation required: Civil Engineering 1 and 2, Mechanical Engineering 7. Reconnoissance, preliminary and location methods, with theory of curves and turnouts. Location of a line, with the preparation of profiles and maps. The computation of earth-work and estimate of cost. Text: Allen's Railroad Curves and Earthwork. Seniors and juniors take this subject at the same time and it is given in alternate years only. It will be given in 1916.

8. **Structural Details.**—Two lecture periods per week, first semester; required in senior year of Civil Engineering Course. Preparation required: Civil Engineering 3 and 6, Mechanical Engineering 16. Lectures on shop practice in making drawings and shop bills and in designing connections and other details for structural steel, including the design of beams, bearings, grillages, columns, struts and girders. Solution of problems required. Handbooks: Cambria Steel and Bethlehem Steel.

9. **Structural Steel Design.**—Three drafting periods per week, first semester; required in senior year of Civil Engineering Course. Preparation required: Civil Engineering 3 and 6, Mechanical Engineering 16. The design and the making of general and detailed

drawing of beams, columns, grillages, and roof truss, a plate girder railroad bridge and a riveted or a pin connected truss bridge. Reference Book: Merriman and Jacoby's Roofs and Bridges, Part III, or Thomson's Structural Design and Typical Railroad Bridges.

10. **Geodetic Surveying.**—Two periods of recitation and field work per week, first semester; required in senior year of Civil Engineering Course. Preparation required: Civil Engineering 1 and 2, Mathematics 10 and 13. Elements of the method of least squares and the application to the adjustment of triangulation. The figure of the earth. Field work in triangulation and in determination of azimuth. Text: Merriman's Precise Surveying and Geodesy.

11. **Irrigation.**—Two recitations per week, first semester; required in senior or junior year of Civil Engineering Course, also in senior year of Mechanical Engineering Course for year in which the subject is given. Preparation required: Civil Engineering 5. A study of the principles of irrigation engineering; namely, a consideration of fundamental questions underlying the design and construction of works for holding and controlling the waters needed for agriculture; and of those matters necessary to insure the financial success of the enterprise. Text: Newell & Murphy's Irrigation Engineering. Seniors and juniors will take this subject at the same time, and it is given in alternate years only. It will be given in 1916.

12. **Bridges and Dams.**—Two recitations and two drafting room periods per week including lectures, second semester; required in senior year of Civil Engineering Course. Preparation required: Civil Engineering 3, 6, 8 and 9. Continuation of Civil Engineering 9 and a study of higher structures, including continuous, draw, cantilever and suspension bridges and metallic arches. The theory and design of masonry walls, dams and arches. Text: Merriman and Jacoby's Roofs and Bridges, Part IV.

13. **Contracts and Specifications.**—Two recitations per week, second semester; required in senior year of the three Engineering Courses. Synopsis of the law of contracts as applied to engineering construction; study of typical contracts and specifications; riparian rights, boundary lines, survey descriptions, etc. Text: Johnson's Engineering Contracts and Specifications.

14. **Reinforced Concrete.**—Three recitations per week, second semester; required in senior year of Civil Engineering Course. Preparation required: Mechanical Engineering 16, Civil Engineering 8 and 9, Mathematics 13. A study of manufacture and properties of cement and reinforcing steel, and of the theory and design

of plain and reinforced concrete construction. Text: Hool's Reinforced Concrete Construction, Vols. I and II.

15. **Sanitary Engineering.**—Three recitations per week, second semester; required in senior or junior year of Civil Engineering Course. Preparation required: Civil Engineering 5. The study of the principles to be observed in order that a pure water supply, and an efficient system of sewerage may be secured, and a study of the design, construction and operation of municipal water supply and sewage disposal works. Text: Merriman's Elements of Sanitary Engineering. This subject is taken by seniors and juniors at the same time and is given in alternate years only. It will be given in 1915.

16. **Steel Buildings.**—Three recitation and drafting room periods per week, first semester; required for fifth year degree in Civil Engineering. Preparation required: Civil Engineering 8 and 9. Design and general drawings of steel mill, mine and high office buildings, and arches.

17. **Dam and Reservoir Design.**—Three drafting room periods per week, first semester; required for fifth year degree in Civil Engineering. Preparation required: Civil Engineering 3, 5 and 15, Mathematics 11 and 13. The study of modern hydraulic construction, dams, reservoirs, levees, etc. Structures relating to water power, canals and irrigation.

18. **Hydraulic Motors.**—Three recitations per week, first semester; required for fifth year degree in Civil Engineering. Preparation required: Civil Engineering 5. A study of reaction and impulse wheels; construction, regulation, testing sources of loss of energy. Text: Church's Hydraulic Motors.

19. **Railroad Engineering.**—Three recitations per week, second semester; required for fifth year degree in Civil Engineering. The construction of the roadbed, including ballast, crossties, rails, switches, culverts, maintenance of way and elements of railroad operation. Economic location, arrangement of yards, station and terminals. Train resistance. Application of electricity.

20-21. **Thesis.**—Two and three hours per week, first and second semester; required for fifth year degree in Civil Engineering. The thesis is intended to show the student's ability to apply the fundamental principles acquired in this course, in original investigation or design of some engineering structure, the student working independently and making regular reports showing the progress

of the investigation or design to the professor having charge of the subject. The subject and plan of the work should be submitted to the professor in charge not later than November first of the current year.

Department of Electrical Engineering

PROFESSOR BRACKETT; ASSISTANT PROFESSOR HOY.

The purpose of the work offered in Electrical Engineering is to impart to the student a practical knowledge of the principles of applied electricity. A well equipped laboratory is provided for the use of the student to supplement the lecture and recitation work of the class room. The laboratory equipment consists of generators and motors of both direct and alternating current types, transformers and measuring instruments of different types and classes for recording and measuring currents, pressures and speeds. A sixty-cell storage battery is used in connection with the work in photometry. Various types of lamps, arc and incandescent, lamp banks, rheostats, and other apparatus are also available.

The student will be taught how to set up and adjust for the best conditions of operation all the usual types of dynamos, motors, transformers and standard auxiliary apparatus. Much additional laboratory work will be given to develop a clear understanding of the fundamental principles involved in the design of modern electrical machinery and in the most advanced engineering practice. The knowledge to be derived from this work is very important in the practical operation of electrical machinery and systems, but it cannot be obtained directly under the conditions of commercial service, where most of the apparatus must be used in one way only at all times.

The following courses are offered:

1. **Electricity and Magnetism.**—Three recitations and two laboratory periods a week, first semester; required in the junior year of the Electrical, Mechanical and Civil Engineering Courses; prerequisite, Mathematics 7, 8 and 9, Physics 4. This subject embraces a study of the theory and principles of static and current

electricity, magnetism and the magnetic circuit, electro-magnetic induction and laws of the electric circuit, primary and secondary batteries.

2. **Electrical Measurements.**—One laboratory period per week, second semester; required in the junior year of the Electrical Engineering Course; prerequisite, Electrical Engineering 1. Instruction and practice in the use, care and standardization of ammeters, voltmeters, wattmeters, resistance standards, Wheatstone bridges, potentiometers, sensitive galvanometers and standard cells. Estimation of the accuracy and reliability of different methods of testing, the correction and elimination of errors.

3. **Dynamo Electric Machinery.**—Three recitations and two laboratory periods a week, second semester; required in the junior year of the Mechanical and Electrical Engineering Courses, and for the fifth year degree in Civil Engineering; prerequisite, Mathematics 11, Physics 4, and Electrical Engineering 1. Theory of the magnetic circuit, magnetic induction in iron, principles underlying the design, construction and operation of generators and motors. Resistance and insulation tests, experimental study of the operation and behavior of different types of motors and generators, efficiency tests.

4. **Alternating Currents.**—Three recitations and two laboratory periods a week, first semester; required in the senior year of the Electrical Engineering Course, also for the fifth year degree in Mechanical Engineering; prerequisite, Mathematics 11, Physics 4, and Electrical Engineering 1 and 3. Study of the flow of alternating currents, inductance, capacity, principles of construction of alternating current generators and motors, transformers; measurements of inductance and capacity, wave form of pressure and current, efficiency tests of machines and transformers.

5. **Dynamo Design.**—Three laboratory periods a week, first semester; required in the senior year of the Electrical Engineering Course; prerequisite, Mathematics 11, Physics 4 and Electrical Engineering 1 and 3. In this course the student works out the design and makes drawings for a shunt or compound wound direct current generator or motor. The object of this course is to teach the theory of design of machines and to familiarize the student with the details and parts of the machine in relation to each other and to the machine as a whole.

6. **Electric Light and Power Distribution.**—Three recitations and two laboratory periods a week, second semester; required in the senior year of the Electrical Engineering Course; prerequisite, Mathematics 11, Physics 4, and Electrical Engineering 4. A study of the

construction of standard transmission lines, both overhead and underground, resistance and inductance effects in these lines, kinds of apparatus used in the generating station and in the receiving station, distributing systems, arc and incandescent lamps, indicating and recording meters, laboratory work in lamp testing, in the calibration of instruments, and in other lines.

7. **Electric Traction.**—Three recitations and two laboratory periods per week during the first semester. Various features of electric car and train operation will be studied. Among these will be types of cars, motors and controlling apparatus, the operating characteristics of various types of equipment, power stations for this kind of service, transmission lines, substations, and distributing systems. A considerable portion of the time assigned for laboratory work in the subject will be given to the inspection of traction systems in actual operation upon which accurate and detailed reports will be required.

8. **General Principles of Electrical Engineering.**—Three class exercises per week. The course will consist of a mathematical treatment of the fundamental principles of electricity and magnetism, and the application of these principles of circuits, systems and machines in regular commercial use. In some ways the course will be a review of all the electrical work of the two preceeding years, but for the most part the methods used will be quite different and much more comprehensive. The object of the course is to give the student a better perspective of the whole subject of applied electricity and to develop more direct methods for solving problems in this field.

9. **Electrical Design.**—Three laboratory periods a week, first semester; required for the fifth year degree in Electrical Engineering; prerequisite, all the work required for the Bachelor's degree in this department. A study of the design of transformers, alternating current generators, induction motors, or some special kinds of apparatus, and the principles involved in the construction of the above.

10. **Power Stations.**—Two recitations and three laboratory periods a week, second semester; required for the fifth year degree in Electrical Engineering; prerequisite, Electrical Engineering 7 and 8. A study of the different types of stations, arrangement of boilers, engines, machines, switchboards and electrical apparatus, location of station with respect to distributing system; station operation and maintenance. A station design is worked out by the student and drawings of plans made, while according to circumstances, more or

less of the laboratory time will be spent on experiments and tests relating to plant operation and control.

11. **Long Distance Transmission.**—Two recitations or lecture periods per week, second semester; required for the fifth year degree in Electrical Engineering; prerquisite, Electrical Engineering 1 to 7 inclusive. Study of long distance line construction, protective apparatus, switchboards, cutouts, regulating devices, etc., as exemplified in the latest practice; study of recent construction and installations, and application of theory. Present theoretical and practical limitations to efficient and profitable distribution over large areas, and the possibilities of future development.

12-13. **Thesis.**—Two or three periods a week, first and second semesters. A complete investigation of some electrical subject or apparatus or the design of a machine or other electrical appliance, containing when possible the results of personal and independent observation. The subject must be selected early in the year (not later than November first), and reports submitted from time to time, concerning the progress of the work, to the professor in charge.

Department of English

PROFESSOR BATES; ASSOCIATE PROFESSOR POWERS; MISS YOUNG.

The aim of the department is two-fold: to train the student in the effective use of the English language in original composition; and to give him an intelligent appreciation of English literature.

For English 1 to 8, see the preparatory department.

9-10. **Rhetoric.**—Three recitation periods a week, throughout the year; required in the freshman year of all the courses leading to the degree of Bachelor of Science. Prerequisite, the English of the preparatory department. The main purpose of this course is to familiarize the student with the principles of rhetoric and to enable him to use them effectively in composition. To this end, written work is demanded constantly, and is carefully criticised both in the class room and in conferences between the instructor and the individual student. The work is supplemented with reading, in the choice of which the student is allowed considerable latitude.

11-12. **English Literature from 1625 to 1798.**—Three recitation periods a week, throughout the year; required in the sophomore year of the General Science and Home Economics Courses. This

course consists in a study of the literature, exclusive of prose fiction, of the ages of Milton, Dryden, Pope and Johnson. A large amount of reading and frequent papers are required. Attention is paid, in lectures, to literary movements and to the relations between literature and other phases of the life of the time.

13-14. **English Literature from 1798 to 1892.**—Three recitation periods a week, throughout the year; required in the junior or senior year of the General Science and Home Economics Courses; elective in various other courses. This course covers the literature, exclusive of prose fiction, of the ages of Wordsworth and Tennyson. Much reading and occasional papers are required. Lectures are given on nineteenth century writers and literary movements, together with their relation to other phases of the life of the time. Frequent conferences are held between the instructor and the individual student.

15. **English Literature, exclusive of Drama, from the Beginnings to 1625.**—Three recitation periods a week, first semester; elective in junior or senior year. In this course special stress is laid on ballad and epic, Chaucer, and the development of the language.

16. **English Drama from the Beginnings to 1625.**—Three recitation periods a week, second semester; elective in the junior or senior year. Shakespeare and his contemporaries receive the main emphasis.

17-18. **Scientific and Social Ideas in Recent Literature.**—Three recitation periods a week throughout the year. Required in the first semester of sophomores in Agriculture and throughout the year of sophomores in the Engineering Courses. The aim of this course is to familiarize the students in the technical departments with some of the main scientific and social tendencies of the present time as these tendencies are mirrored in current and late nineteenth century literature in England and America. Questions of art-form receive only secondary consideration, the chief stress being put upon the thought-content of the literature studied. Frequent papers and oral class reports are required.

19-20. **The English Novel.**—Two recitation periods a week, throughout the year; elective in the junior or senior year. Owing to the large amount of reading, the course counts as three hours' credit each semester.

21-22. **Biblical Literature.**—Two recitation periods a week, throughout the year; elective in the junior or senior year.

Department of Modern Language

PROFESSOR SPENCER; MISS WIMPLE.

A good reading knowledge of French or German, or of both, is imperative for students pursuing work along scientific, technical or historical lines, and they are indispensible as literary and cultural subjects.

Two years of German are offered in the preparatory course. In the General Science, the Home Economics and the Agriculture Courses of the College, either French or German is required during the freshman and sophomore years. Elective work in both French and German is offered and the student is strongly advised to take a third year if possible of the language chosen. In the second year German a special division read scientific German.

1. **German.**—Four recitations a week, first semester; optional in the freshman year according to above requirements. German grammar and composition; reading and telling short stories for practice in speaking German; memorizing selected poems. Text: Joynes-Meissner's Grammar.

2. **German.**—Four recitations a week, second semester. Continuation of German 1. Storms' Immensee.

1a. **German.**—Four recitations a week. More advanced work in grammar and composition, and story telling, than in German 1. Constant practice in speaking German, and reading and memorizing of German poems. Texts: Moni der Geissbub and Gerstacher's Germelshausen or Immensee, etc. Joynes-Meissner's Grammar.

2a. **German.**—Four recitations a week, continuation of German 1a. Constant practice in speaking German; memorizing poems and selected passages. Texts: Joynes-Meissner's Grammar. Gerchichten von Rhein.

3. **German.**—Four recitations a week, first semester; optional in the sophomore year according to the above requirements. Prose and poetry of the last century; composition and conversation; memorizing of selected poems. Text: Joynes-Meissner's Grammar. Geschichten von Deutschen Stadten.

4. **German.**—Four recitations a week, second semester; continuation of German 3. Text: Schiller's William Tell. Additional reading and composition.

5. **German.**—Three recitations a week, first semester; elective in the junior or senior year. Written and oral composition, and readings such as Freytag's Journalisten and Goethe's Hermann und Dorothea.

6. **German.**—Three recitations a week, second semester; elective in the junior or senior year. Goethe's life and works; Goethe and Schiller; or Wenckebach's Meisterwerke des Mittelalters, with collateral reading.

FRENCH.

1. **French.**—Four recitations a week, first semester; optional in the freshman year according to the above requirements. French grammar and composition. Thorough drill in pronunciation; reading and practice in speaking begun very early. Text: Fraser and Squair's Grammar.

2. **French.**—Four recitations a week, second semester. Continuation of French 1. Dictation exercises, memorizing of selected passages, conversation. Text: Super's Reader.

3. **French.**—Four recitations a week, first semester; optional in the sophomore year according to the above requirements. Readings from nineteenth century writers; Koren's French composition.

4. **French.**—Four recitations a week, second semester. Continuation of French 3.

5. **French.**—Three recitations a week, first semester; elective in the junior or senior year. Corneille, Racine, La Fontaine; their lives and works; their influence on their contemporaries; the literature and society of their time.

6. **French.**—Three recitations a week, second semester; elective in the junior or senior year. Open to those who have completed French 5. Moliere and Voltaire; their lives and writings; their influence on French and English thought.

Department of History and Political Science

PROFESSOR HARDING; MISS YOUNG.

The aim of this department is to introduce the student to such studies as may enable him to deal with economic problems and to fulfill his social and political duties; to develop in him the power to use critically and constructively the historical method, and especially to awaken in him an interest

in the great field of history and political science and an enthusiasm for personal individual effort. Constant endeavor is made to teach the practical application of the social, political and economic experiences of the race to the problems of modern life.

The text-book is supplemented by lectures and class discussions based upon assigned readings or the original work of students. Students are encouraged in every way to make use of the College library, which is the tool house of this department.

For History 1 to 6, see the preparatory department.

7. **Medieval History.**—Three recitations a week, first semester; required in the sophomore year of the General Science and junior year of Home Economics Courses. A general survey of the history of Europe from the barbarian invasions to the close of the fifteenth century. Lectures, text-books, papers, reports and practices in application of the fundamental principles used in testing the value of historical material. Text: Robinson's History of Western Europe.

8. **Modern History.**—Three recitations a week, second semester; required of the same classes as History 7, of which it is a continuation. History of Europe from the opening of the sixteenth century to 1815.

9. **American History.**—Three recitations a week, first semester; elective in the junior or senior year; prerequisite, History 7 and 8. A study of constitutional and political development from 1783 to 1829. Lectures, library work, reports, and careful study of assigned sources.

10. **American History.**—Three recitations a week, second semester. Continuation of History 9. The constitutional and political history of the United States from the beginning of Jackson's administration to the Civil War.

11. **Nineteenth Century History.**—Three recitations a week, first semester; elective in junior or senior year; prerequisite, History 7 and 8. A study of national development and of international relations between 1815 and 1870, prefaced by a brief survey of the French Revolution and Napoleonic Empire. A detailed study of the Restoration, the Revolution of 1848, the Unification of Italy and

the Formation of the German Empire. International relations since 1870. Present day questions of European politics. Text: Robinson and Beard's Development of Modern Europe. (Omitted in 1915-16).

12. **Contemporary American History 1877-1913.**—Three recitations a week, second semester; elective in junior or senior year; prerequisite, one year of college history. The restoration of white dominion in the south, the economic revolution, the revolution in law and politics, parties and political issues, 1877-1896; federal legislation from 1877 to 1896; last phases of the silver situation; new phase in American diplomacy; the development of capitalism; the war with Spain; expansion and its problems; the administration of Theodore Roosevelt; Mr. Taft and republican disintegration; the campaign of 1912; policies of the Wilson administration. This course will be prefaced by a rapid survey of the reconstruction era. Text book, discussions, readings and reports. (Omitted in 1915-16).

13. **American Government.**—Three recitations a week, first semester. Required in the junior year of the General Science course. General survey of federal, state, and local governments in theory and practice. Emphasis in this course is placed upon real governmental operations. Text book, discussions, and reports. Text: Beard's American Government and Politics.

14. **Political Parties and Practical Politics.**—Three recitations a week, second semesters. Required in the junior year of the General Science course. This course considers such topics as the characteristics and importance of parties, nominating methods, party machinery, campaign methods, party finance, educational and other suffrage qualifications, election laws, the spoils system, civil service reform, machines and bosses, practical politics in legislative bodies, state and local politics, and remedies for legislative evils. Text-book, discussions and reports. Ray's Political Parties and Practical Politics.

15. **Economics.**—Three recitations a week, first semester; required in the senior year of all the four year courses except the Pharmacy Course. A study of the fundamental laws of economic science. Text-book, supplemented by lectures on special subjects and assigned readings.

16. **Sociology.**—Three recitations a week, second semester; required in the senior year of the Home Economics and General Science Courses. The fundamental principles of social science. Text-book, supplemented by lectures and special reports.

17. **The Rural Community.**—Two recitations a week, first semester. Elective for juniors or seniors in the Agricultural and General Science groups. A general survey of the field of rural sociology, including the following topics: Types of communities, movements of population, advantages and disadvantages of farm life, social conditions and life of rural people, rural health and sanitation, the various social institutions of the rural community, boys' and girls' clubs, farmers' clubs, the grange, the rural church and the rural school, an analysis of the fundamental problems of rural life; the country life movement and the reorganization of rural social forces. Lectures, readings and reports.

18. **Agricultural Economics.**—Three recitations a week, second semester; required in the senior year of the Agricultural Course, elective in other courses. The economic elements in the production and distribution of agricultural wealth, the agricultural market, determination of price, speculation, business co-operation, credit facilities, ownership and tenancy, farmers' organizations, the farmer and legislation, problems of rural social life, the relation of the farmer to the state. Text-book, lectures, readings and reports.

19. **History of the West.**—Two recitations a week, first semester; elective in the junior or senior year. A study of the settlement of the West and of the influence of the West upon national dvelopment from 1815 to 1860.

20. **History of the West.**—Two recitations a week, second semester; elective in the same courses as History 19 of which it is a continuation. A study of the economic and political development of the West, 1860 to the present.

Department of Education

PROFESSOR McPROUD.

The courses in this department are organized with two specific ends in view: (a) to make clear in an introductory way the problems of the physical, mental, and moral life of the individual, and (b) to arrive at the safest, sanest and most economic ways and means of solving these problems. The courses in Philosophy aim to give a general knowledge of the facts and laws of experience with special emphasis upon the relations of mind and body and upon the practical significance of the facts and laws for practical every-day life. The

prevailing theories of life are studied with the aim of constructing in consciousness a wholesome basis for the fullest and most efficient living. The courses in Education are planned to give a clear grasp of the organization and administration of public education with special emphasis on the present theory and practice in educational procedure. The purpose is to make all courses concrete and practical.

1. **General Psychology.**—Three recitations per week, first semester; required in the junior year of the Agricultural, Home Economics, and General Science Courses. The structure and function of the nervous system; discussions of the several phases of the mental processes with special emphasis upon their origin and functions. Class room discussions, lectures, assigned readings, demonstrations and experiments. Text: Angell's Psychology.

2. **Ethics.**—Three recitations per week, second semester; required in the junior year of the Home Economics and General Science Courses. Beginnings and development of the different views of the moral life; theories of moral standards; practical problems; discussions, text-book work. Paulsen, Dewey and Tufts, Bowne, Seth and others are used as basis of the course.

3. **History of Education.**—Three recitations per week, first semester; elective in junior year. A study of the conscious effort of the human race to realize itself through educational processes from primitive times down to the present, with a view to discovering the best theory and practice of the nations at various stages of human development, and to the further end of discovering the best practice in modern education. Special emphasis is laid upon the modern period. Lectures, recitations, assigned readings, and a semester theme. Monroe's Brief Course is used as a basis of the course.

4. **School Organization and Administration.**—Three recitations per week, first semester; elective in the junior and senior years. An introduction into the history of school organization; different types of organization in Europe and America and their points of efficiency; the relation of Organization to the Administration of the Curriculum and to Instruction. Problems will be chosen to meet the needs of the class. Lectures, discussions, assigned readings, reports. Strayer and Thorndyke, Holmes, and Dutton and Snedden are used as the basis of the course.

5. **Principles of Teaching.**—Three recitations per week, second semester; elective in the junior and senior years. An application of th principles of Psychology to the technique of instruction. Prin-

ciples of instruction as used in the drill lesson, in the deductive and deductive lessons, review and examination lessons, lesson plans and lesson planning, class-room management. Strayer's Teaching Process and Bagley's Class-Room Management are used as the basis of the course.

6. **Psychology of Child Development.**—Three recitations per week, second semester; elective in junior and senior years. Psychology a prerequisite. A study of the conditions and laws of the growth and development of the physical, mental, moral and spiritual life of the child; special emphasis on the genesis of the mental powers, the nature and method, and means of their unfolding; a study of the various stages in growth and the proper treatment of each; function of the instincts in growth and development. Lectures, discussions, readings, themes. Based upon Kirkpatrick's Fundamentals of Child Study, Barnes' Studies, and others.

7. **Principles of Education.**—Three recitations per week, second semester; elective in the junior and senior years. Psychology a prerequisite. Study of psychological principles as applied to a scientific study of Education as a science; educational aims and values; the study of the science of education in its relation to individual and social needs and efficiency. A course in Educational Theory. This course differs from Principles of Teaching in that it is not the application of psychological principles to the technique of instruction; but rather is a study of the psychological foundations upon which systems of education are constructed, with a view to testing and measuring the efficiencies of those systems. Lectures, discussions, readings and reports. Based upon Henderson, Ruediger, Horne, Bagley. Elective in junior and senior years.

8. **Observation and Practice.**—Five periods per week, either semester. Daily practice and observation in the class room with full charge of a class under competent supervision. Daily lesson plans, carefully criticised, then followed by teaching. A careful study of the best pedagogical literature upon the subject taught. Offered only to seniors who have completed practically the fifteen hours in pedagogy. Elective in the senior year.

Students taking this course should arrange in the preceding semester for the work.

Department of Public Speaking

PROFESSOR BROWN.

To meet the ever increasing demands of the spoken word as a factor in leadership, and to develop skill in interpretative reading, the following courses are offered:

1-2. **Literary Interpretation.**—Three recitations per week throughout the year. Voice training, bodily expression, oral interpretation and analysis of the lyric and drama. The aim of this course is to gain a keener appreciation of imaginative literature and to render it naturally and effectively.

3-4. **Extempore Speaking.**—Two recitations per week throughout the year. Student trained to think and express himself while on his feet. Criticism on the organization and presentation of material. Attention is given to gesture, voice and such elements of grace as are essential to effective speaking. (Two sections).

5-6. **Extempore Speaking.**—One recitation per week throughout the year. This course is similar to 3-4 and is open only to students of the Engineering Department.

7. **Argumentation and Debate.**—Two recitations per week for the first semester. A study of the problems underlying conviction and persuasion. Analysis and briefing of public questions. Development of briefs into forensics and drill in their vigorous presentation. This course is especially recommended to those students who may be looking forward to taking part in intercollegiate debating.

8. **The Speech for Special Occasions.**—Two recitations per week for the second semester. A study of form for the special occasion, the speech of the president, the commemorative speech, the speech of dedication, of acceptance, of response, the speech of welcome. In addition to extempore work, written speeches will be required.

9-10. **Public Address.**—Two recitations per week throughout the year; prerequisite, Public Speaking 3-4. The Rhetoric of Oratory. A study and presentation of the various forms of public address. The writing and delivery of orations. Attention to those elements of psychology which are basic in public speaking.

11-12. **Elementary Public Speaking.**—Four recitations per week throughout the year. Articulation and flexibility of voice. The study and reading aloud of short poems, extracts from speeches for the development of ease and confidence. Extempore Speaking. Open to the pupils of the School of Agriculture. Elective in the junior or senior year.

Department of Mathematics

PROFESSOR BROWN; MR. MILLS.

The general work of this department is planned to cultivate habits of systematic and accurate thinking, as well as

facility in making calculations. Independent effort is encouraged to the greatest possible extent, the solutions of problems and original demonstrations forming an important part of each course.

The class work in general astronomy is supplemented by the use of instruments in the observatory. These include a six-inch equatorial telescope, a transit instruments, a sidereal clock and a chronograph.

For Mathematics 1 to 6, see the preparatory department.

7. **Solid Geometry.**—Three recitations a week, first semester; required in the Engineering Courses, optional in the General Science Course, freshman year; prerequisite, Mathematics 6. All the important principles of the subject will be covered. Text: Sanders' Plane and Solid Geometry.

8. **College Algebra.**—Five recitations a week, first semester; required in the Engineering Courses, optional in the General Science Course, freshman year; prerequisite, Mathematics 4. Graphs, permutations and combinations, complex numbers, elementary theory of equations, determinants, partial fractions.

9. **Plane and Spherical Trigonometry.**—Five recitations a week, second semester; required in the freshman year of the Engineering Courses; optional in the freshman year of the General Science Course; prerequisite, Mathematics 6. The elementary notions of trigonometry; solutions of triangles.

11. **Analytic Geometry.**—Five recitations a week, first semester; required in the Engineering Courses, sophomore year; prerequisite, Mathematics 8 and 9.

12. **Calculus.**—Five recitations a week, second semester; required in the sophomore year of the Engineering Courses; prerequisite, Mathematics 11. Continuation of Mathematics 11.

13. **Analytic Mechanics and Calculus.**—Five recitations a week, first semester; required in the junior year of the Engineering Courses; prerequisite, Mathematics 12. The application of analytic geometry and calculus to the solution of mechanical problems.

14. **Analytic Mechanics.**—Three recitations a week, second semester; required in the junior year of the Engineering Courses.

15. **General Astronomy.**—Three recitations a week, second semester; required in the junior or senior year of the General Science, Home Economics and Engineering Courses; prerequisite, Mathematics 6. The text will be covered and frequent use made of the instruments.

Department of Physics

PROFESSOR MATHEWS; ASSOCIATE PROFESSOR HOY.

From the fact that physics is one of the foundation sciences and that a knowledge of its laws is necessary to every student seeking a scientific training, the department has been well fitted with rooms and appliances to provide this training. Its lecture rooms are well provided with arm-rest opera chairs. The laboratories are well lighted and provided with non-vibratory piers. Water, gas and electricity are furnished for the recitation rooms and the dark room and laboratories.

This department is housed in the engineering and physics building. Its facilities and equipment for instruction are equal to those of any in the Northwest.

The laboratory equipment includes such expensive pieces as analytical balances, laboratory clock making electrical contact every second, cathetometer, spectroscopes, miscroscopes, photometers, stereopticon (arc light), standard cells, dynamos, electrometers, transformers, galvanometers, storage batteries, induction coils, ammeters, magnetometers, voltmeters, wattmeters, Wheatstone bridges, polariscope, quadrant electrometer, Kelvin's current balances, lathe and wireless telegraphy and X-ray apparatus.

The following subjects are offered in this department:

For Physics 1 and 2, see the preparatory department.

3. **General Physics.**—Three recitations and two laboratory periods a week, first semester; required in the sophomore year of the Engineering Courses, elective in the sophomore, junior or senior year of various other courses. Young ladies following the General Science Course may elect Home Economics 4 and 7 instead of Physics 3; prerequisite, Physics 2 and Mathematics 9. Mechanics of solids and fluids, heat and sound with numerous examples. Exact measurements of mass, distance, time, calorimetry, nature and velocity of sound, etc.; study of electrical and magnetic fields.

4. **General Physics.**—Three recitations and two laboratory periods a week, second semester; required in the same courses as Physics 3; young ladies pursuing the General Science Course may elect Home Economics 3 instead of Physics 4; prerequisite, Physics

3. Electricity and its applications in the dynamo, motor and transformer, electric light and study of electrical and magnetic fields; refraction and reflection of light, interference and color. Laboratory work on topics mentioned.

5. **Advanced Physics.**—Four recitations and one laboratory period a week, first semester; elective in the junior or senior year; prerequisite, Mathematics 12 and Physics 4. Mechanics, kinematics, kinetics, mechanics of fluids and heat and its application; magnetism, static electricity, electrolysis. Laboratory work and measurements covering topics mentioned. Texts: Nichols and Franklin, Vols. 1 and 2; Nichols' Laboratory Guide.

6. **Advanced Physics.**—Four recitations and one laboratory period a week, second semester; elective in junior or senior year. Induction currents, primary batteries, electric oscillations and waves, nature and motion of sound, physical theory of music, nature and propagation of light, refraction, reflection, interference, color and polarization; laboratory work. Texts: Nichols and Franklin, Vol. 3; Nichols' Laboratory Guide.

7. **Heat.**—Three recitations and one laboratory period a week, first semester; elective in the senior year; prerequisite, Physics 5. Sensible and latent heat, dynamical generation of heat, thermometry, calorimetry, specific heat, atomic and molecular heat capacities, evaporation, ebullition, vapor densities, cooling, diathermancy, conductivity, and dynamical equivalent of heat, laboratory work covering topics mentioned.

8. **Light.**—Three recitations and one laboratory period a week, second semester; elective to the same classes as Physics 7, of which it is a continuation. Shadows and images, spectrum, velocity of light, color, phosphorescense, fluorescence, diffraction, measuring waves, prisms and polarization; laboratory work.

9. **Physics of Heat.**—Two recitations a week, second semester; required of Freshmen in the course in Home Economics; prerequisite, Mathematics 4. Theory of heat, thermometry, calorimetry, transference and conductance of heat, etc. Especial emphasis is laid on practical applications of heat.

Department of Botany and Plant Pathology

PROFESSOR MICHEL; MISS ELLIOTT.

In the work of this department, the structure, physiology, classification and pathology of plants, and the fundamental problems of cell structure and function are studied, as well as

the direct application of botanical science to pharmacy and agriculture. This work also helps to serve as a foundation for courses in forestry, plant breeding, plant pathology, etc.

The instruction aims primarily to develop the powers of accurate observation and the ability to draw correct conclusions.

Both the elementary and advanced laboratories are well equipped with microscopes and other necessary apparatus for carrying on advanced or original research work. The department also has fairly complete, convenient herbaria of the flowering plants and fungous flora of the northern United States.

2. **General Botany.**—Two lectures or recitations and three laboratory periods a week, first semester; required in the sophomore year of the Agricultural, Home Economics and Pharmacy Courses, elective in the sophomore, junior or senior year of various other courses; prerequisite, the work of the freshman year. The general principles of biology as illustrated by plants; a study of the life histories of types of plants, including their physiology and systematic relations.

3. **General Botany.**—Two lectures or recitations and three laboratory periods a week, second semester; required and elective in th same courses at Botany 2, of which it is a continuation; prerequisite, Botany 2.

4. **Plant Physiology.**—Two recitations and three laboratory periods a week, second semester; required in the junior year of the horticulture and plant pathology group, Agricultural Course; elective in junior or senior year; prerequisite, Botany 2 and 3.

The course deals with the most important life processes of the plant, including the properties of living matter; the general physiology of metabolism, growth, reproduction and irritability; the imitation and control of life processes.

5. **Plant Pathology.**—Two recitations and three laboratory periods a week, first semester; prerequisite, Botany 2 and 3. The first part of the term is devoted to the cause, nature and classification of the fungi, special emphasis being placed on the organisms of economic importance; the latter part of the course is devoted to the morphology of the diseases and their control, especially those

found in South Dakota. In the laboratory work the student is, as far as possible, brought into direct contact with the diseases as found in the field.

6. **Advanced Plant Pathology.**—Elective in the junior or senior year. The course will be given to such students as have had Botany 5 or equivalent work. The laboratory hours and the recitations to be arranged with the instructor. The number of credits will depend upon the amount of time given to the work, which will consist of individual laboratory work and assigned readings.

7. **Classification of Pteridophytes, Gymnosperms and Angiosperms.**—Five recitations and laboratory periods a week, first semester; elective in the junior or senior year; prerequisite, Botany 2 and 3. The systematic arrangements and classification of the ferns and their allies, and especially of the higher flowering plants. The structure and relationship of weeds, grasses and grains, and other plants of economic importance will be emphasized in the course.

8-9. **Plant Histology.**—Five recitations and laboratory periods a week, first semester; elective in junior or senior year; prerequisite, Botany 2 and 3. The work will consist in the embedding, sectioning and staining of tissues from the various groups of plants. Text-book: Chamberlain's Methods in Plant Histology.

10. **Heredity.**—Three recitations a week, second semester. The work is offered in connection with the Department of Horticulture, which will give practical work along the line of plant breeding. This course deals with the principles of variation and heredity, and their bearing upon the theory of organic evolution. The first part of the semester will be devoted to the general principles of heredity and their application to man, the latter half will deal with plant breeding and its practice in this state.

Texts: Walter's Genetics and Bailey's Plant Breeding.

11. **Pharmacognosy.**—Five recitations and laboratory periods a week, second semester; required in the first year of the Pharmacy Course; prerequisite, Botany 2. The sources, characteristics, histology, identification, etc., of the common drugs.

12. **Economic Botany.**—One recitation and two laboratory periods a week, first semester; elective in the junior or senior year. The aim will be to acquaint students with our poisonous plants and with our more common weeds. Numerous field trips will be made in the early fall.

Entomology and Nature Study

PROFESSOR SEVERIN; MR. GILBERTSON.

The work of this department is conducted by means of lectures, recitations, laboratory and field work. The student is thus afforded not only an opportunity to gain familiarity with the principles and theories discussed in the class room, but is also encouraged to put these theories to the test and verify the principles in the field. In the way of illustrative material, in addition to the general museum and the entomological collections, there are a large number of lantern slides, microscopic slides, and alcoholic and formalin preparations. The department is well provided with all the apparatus necessary for biological work.

For Entomology 1 and 2, see the preparatory department.

3-4. **General Entomology.**—One recitation and one laboratory period a week during first semester; one recitation and two laboratory periods during the second semester; required in the sophomore year of the Agricultural Course; elective in the junior or senior year of the General Science Course. A general course dealing with the anatomy, physiology, embryology, behavior, classification and life history of insects. The work of the second semester will be devoted in part to a discussion of some of the more important insect pests and methods of controlling them. This course is designed as an introduction to the practical work in economic entomology offered in courses 5 and 6 and to the systematic work offered in courses 7 and 8.

5-6. **Economic Entomology.**—One lecture period and two laboratory periods a week throughout the year; elective in the junior or senior year; prerequisite, Entomology 3 and 4. A detailed study in the field and lecture room of the chief economic species of insects with a study of insecticides and spraying machinery. The student will be given an opportunity of preparing sprays and gases used in combatting insect pests and demonstrations will be offered in the practical application of the same.

7-8. **Systematic Entomology.**—Two or more laboratory periods a week; elective in the senior year. This course, while primarily entomological, is designed to be of general use to students of biology. It has for its object not only to get the student acquainted with the more common forms of insect life, but is also designed to give

the student an idea of the aims and methods of classification. Each student will be required to do his own collecting and mounting of insects; the collections of the department will be available to the student at all times for reference work.

9. **Household Pests.**—Two lectures and one laboratory period a week, second semester; elective in the senior year. The household insects and other animals that are of economic importance will be especially emphasized in this course, together with methods of extermination.

10. **Insects and Disease.**—Two lectures a week, first semester; elective in the junior or senior year. The greater share of the semester will be devoted to a discussion of the diseases which are disseminated through the insects and which affect man and domestic animals.

11. **Bird Study.**—One lecture and two laboratory periods or field excursions a week, second semester; elective in the junior or senior year. The lectures will deal with the various phases of bird life; the laboratory periods are designed to acquaint the student with the anatomy of various types of birds, while the field work will be devoted to studying the birds as they are found in the field, particularly with reference to their field identification, feeding and nesting habits. Each student should provide himself with a field or opera glass and a copy of Florence Merriam Bailey's Handbook of Birds of Western North America.

12. **Nature Study.**—Three recitations a week, first semester; elective in the junior or senior year. This course is intended primarily for those who expect to teach in the public or high schools. Its object will be to give the nature point of view and the course will be a discussion of methods and materials as well as an elementary science treated from the biological side.

13. **Animal Behavior.**—Two recitations per week, first semester; elective in the junior or senior year. The evolution of animal behavior forms the principal theme of this course and is of much significance for the study and correct understanding of human psychology and sociology. This course will be useful to those engaged in educational work.

Department of Zoology

PROFESSOR MILLER.

Students of Agriculture and Domestic Science as well as those of General Science, should have a thorough foundation in the principles of Animal Biology, and this is what the department aims to accomplish. Besides this it trains the students in methods of zoological research and technique, and attempts to develop original and independent thought.

Students who contemplate the study of human or veterinary medicine will find that it is to their advantage to elect advanced work in the department. These professions are biological sciences and one should have a most thorough training to enter them. For those courses which are the so-called pure scientific courses in medicine credit is usually given and the student is privileged to elect other work in the professional school.

The department is well equipped with apparatus for the courses offered. Microscopes, type specimens, skeletons, for the general courses. Microtomes, ovens,. glassware, stains and reagents for the advanced work furnish as excellent equipment as one would wish. There is a small but well chosen working library of about two hundred volumes.

For Zoology 1 and 2, see the preparatory department.

3-4. **General Zoology and Physiology.**—Two recitations and three laboratory periods a week, first and second semesters; required in the sophomore or junior year of the Agricultural Course, and in the junior year of the Home Economics Course; prerequisite, Art 1 and all the subjects below the sophomore year.

a. **General Zoology.**—A study of type forms of invertebrates and vertebrates, and the elements of history and embryology. Texts and references: Hertwig's Manual of Zoology; Parker and Haswell's Text-book of Zoology; Lange's Comparative Anatomy.

b. **Physiology.**—This subject continues throughout the last half of the second semester. Lectures, recitations, demonstrations, and required readings in advanced human physiology. Texts and

references; Thornton's Human Physiology; American Text-book of Physiology; Landois' Human Physiology; Verworn's General Physiology.

Note—Students of Agriculture are required to take Veterinary 7 in place of Human Physiology during the last half of the second semester.

5-6. **Anatomical Methods.**—Three recitations and two laboratory periods a week, first and second semesters; required in the second year of the two-year Pharmacy Course. This subject is intended to acquaint students preparing for the study of medicine with anatomical nomenclature, and methods of dissection. It includes the study of the anatomy of the cat, with special reference to Physiology. Texts: Davidson's Mammalian Anatomy; Riegart and Jennings' Anatomy of the Cat; Morris' Human Anatomy.

7-8. **Histology.**—Five recitations and laboratory periods a week, first and second semesters; optional with Bacteriology in the junior year of the veterinary group, Agricultural Course; prerequisite, Zoology 3 or 5. The structure of the cell and the tissue elements, together with microtechnique during the first semester; vertebrate organology, the microscopic structure of vertebrates during the second semester. Texts and references: Bohm-Davidoff's Text-Book of Histology; Wilson's The Cell; Stohr's and Szymonowiczs-MacCallum's Text-Book of Histology.

9. **Vertebrate Embroyolgy.**—Three or five hours a week, first semester. The course includes the study in the laboratory of the processes of fertilization, cleavage, principles of growth, formation of the germ layers and the foetal membranes, as well as the study of the development of some system of organs. For five hours credit the student must prepare a series of microscopical preparations of at least four stages of trout, chick and pig embryos, and make a model of the development of some organ. Students electing this course must have completed Zoology 3 and 4 or 5 and 6, or equivalent.

10. **Bacteriology.**—Five hours credit, first semester; required in the junior year of the Domestic Science and in Dairy Group of Agricultural Course; elective in General Science. The course includes the study of morphology and biology of the bacteria and special reference is made to Public Health. The laboratory work consists of technique and the study of several of the common forms of bacteria. Text: Jordan.

11. **Applied Bacteriology.**—Five hours credit; elective. Class conferences twice a week. Laboratory work on methods of air, water and soil determination. Text: Marshal's Microbiology.

12. **Comparative Anatomy.**—Three or five hours credit; second semester. A comparative study of the skeletal, digestive, vascular, nervous and unorgenital systems of the vertebrate. For five hours credit, the student must make a comparative study of the development of some system in three groups, and make models.

Department of Chemistry

PROFESSOR SHEPARD; ASSOCIATE PROFESSOR DUNBAR; MR. YOUNGBERG; MR. BINNEWEIS; MR. SHEA.

This department is equipped with the latest and most approved appliances for instruction.

The student upon beginning the subject is assigned a desk in the main laboratory. This desk is supplied with a set of reagent bottles, gas and water fixtures. In addition to these a supply of all needful apparatus, such as test tubes, generating flasks and the like, are furnished. The main laboratory, which is located on the first floor of the Chemistry and Pharmacy Building, accommodates one hundred and twenty students, all working at the same time.

Upon completing the necessary elementary work the student now finds a quantitative laboratory at his disposal. This laboratory accommodates fifty students working together. It is supplied with all quantitative apparatus, such as precipitation flasks, desiccators, lamps and crucibles.

In connection with the quantitative laboratory is a balance room supplied with high grade Troemner quantitative balances. The work is so planned that the student has laboratory work together with didactic instruction throughout the course.

The experiment station laboratories are also located at this College, and their costly and technical appliances and the practical work in constant progress there are within reach for instruction.

1. **Elementary Inorganic Chemistry.**—Five recitations and laboratory periods a week, first semester; required in the freshman year of all the courses leading to degrees; prerequisite, Physics 2. History of chemistry, elements, compounds, symbols, valence, atomic weights, chemical equations, oxygen, hydrogen, nitrogen, chlorine, bromine, fluorine, iodine, sulphur, phosphorus, silicon and their compounds. Bases, salts, acids and alkalies. The metals and their compounds, separation of metals, groups of metals and uses of their compounds. Detection of the non-metallic elements and their compounds. Text: Shepard's Elements of Chemistry.

2. **Elementary Organic Chemistry.**—Five recitation and laboratory periods a week, second semester; required in the freshman year of all the courses leading to degrees; prerequisite, Chemistry 1. The principal classes of organic compounds, the characteristics and properties of each class and the uses of their various compounds. Detection of principal metals and the working of a list of unknowns; the detection of principal organic compounds. Text: Shepard's Elementary Organic Chemistry.

3. **Quantitative Chemistry.**—Five recitation and laboratory periods a week, first semester; required in the sophomore year of the Agricultural and Pharmacy Courses; elective in the sophomore, junior and senior years; prerequisite, Chemistry 1 and 2. The apparatus and its uses. Explanations of methods of quantitative determinations and reports of students' analyses. The quantitative analyses of typical chemical compounds, e. g., calcite, magnesium sulphate, metallic ores, coal, etc. Text: Olson's Quantitative Chemistry.

4. **Chemistry and Physiology of Foods.**—Five recitations and laboratory periods a week, second semester; required in the sophomore year of the Home Economics Course; elective in the junior or senior year; prerequisite, Chemistry 1, 2 and 3. Food nutrients, chemical characteristics and offices of same, physiology of same, metabolism, balanced rations, standard dietaries. Study of food adulterations. Experiments in digestion of foods, offices of digestive secretions. Detection of adulterants, coloring matter and preservatives.

5. **Agricultural and Sanitary Analysis.**—Five recitations and laboratory periods a week, first semester; elective in the junior or senior year; prerequisite, Chemistry 1, 2 and 3. Analysis of disinfectants, germicides, etc. Lectures, Official Methods American Association of Official Agricultural Chemists.

6. **Agricultural Chemistry.**—Three recitations a week, second semester; required in the junior year of the animal husbandry group, Agricultural Course; elective in the junior or senior year; prerequisite, Chemistry 1, 2 and 3. Text: Johnson's Agricultural Chemistry.

7. **Industrial Chemistry.**—Three recitations a week, first semester; elective in the junior or senior year; prerequisite, Chemistry 1, 2 and 3. Chemistry of manufacturing glass, paper, sugar, petroleum, explosives, acids, water, air, mortars, pigments, photography, alkalies and gases. Demonstrations of examples, including water pollution, purification, artificial illumination, petroleum, testing fermentation, air contamination, disinfection, ventilation, bleaching and dyeing. Text: Thorpe's Industrial Chemistry.

8. **Household Chemistry.**—Five recitation and laboratory periods a week, first semester; required in the sophomore year of the Home Economics Course; prerequisite, Chemistry 1 and 2. Students in four year Home Economics Course intending to specialize in Chemistry should take Chemistry 3 instead of Chemistry 8. This course includes the chemistry of cooking, baking, fermentation, cleansing agents, water, soaps, inks, stains, disinfectants, preservatives, etc., as applied to good housekeeping in every day life. Lectures, notes and references.

9. **Organic Chemistry.**—Three recitation and two laboratory periods a week, first semester; elective in the junior or senior year. The Aliphatic compounds. Chemical theory and principal compounds of the paraffine series. The preparation of typical members. Typical analytical methods. Text: Perkin and Kipping, with explanatory lectures.

10. **Organic Chemistry.**—Three recitation and two laboratory periods a week, second semester; a continuation of Chemistry 9. Theory, structure, preparation and analysis of the Benzenes, Naphthalenes, Anthracenes, Pyridines, Alkaloids, Amino Acids, Terpenes, Dyes, etc.

11. **Organic Chemistry.**—Three recitations and two laboratory periods a week, second semester; required in the sophomore year of the Agricultural Courses; prerequisite, Chemistry 1, 2 and 3. An elementary course in Organic Chemistry. Includes the general theories, and typical reactions of the aliphatic and aromatic compounds. Preparatory to the practical application of this knowledge in advanced Agricultural work. Text-book: Remsen's Organic Chemistry.

12. **Elmentary Chemistry as Applied to the Home and Farm.**—Five months course, third year students in School of Agriculture. Not open to regular students in four year courses. A brief study of the principal elements concerned in Agriculture. Brief discussions of germination, fertilizers, insecticides, disinfectants, cleansing agents, paints, preservatives. Feeds, rations, etc. Two recitations and two laboratory periods per week. Text: Snyder's Chemistry of Plant and Animal Life, lectures and notes.

Department of Pharmacy

PROFESSOR WHITEHEAD.

PURPOSE.

The purpose of this department is to train young men and women in the science of pharmacy. The passage of the Food and Drug Act by Congress, and similar legislation by our own state has placed very great importance on pharmaceutical education. Under the present commercial conditions it is nearly impossible for one to prepare himself to meet the requirements of these laws except by taking a thorough college course.

The demand for educated pharmacists is becoming greater every day. In fact, even at present, some of the states will not allow one to take the examination for registration unless he is a graduate of a reputable school. This department meets both the preparatory and professional requirements of the New York Educational Department with which it is registered in full. It is also a member of the American Conference of Pharmaceutical Faculties.

Graduates from the Department of Pharmacy in the State College have been uniformly successful in passing the State Board examinations, only two having failed to meet the requirements of the Board during the past sixteen years.

ENTRANCE REQUIREMENTS.

Among the regulations of the South Dakota State Board of Pharmacy is the following:

"Hereafter during the year 1906, all applicants appearing for registration by examination, must present with their application an affidavit showing that they have completed a

course of study (or its equivalent) of one year high school work. In 1907, two years; in 1908, three years, and in 1909 the presentation of a high school diploma will be required. These requirements were recommended by the Association in annual meeting at Canton in 1903. It is therefore expedient that all proprietors doing a drug business in this state acquaint their clerks and apprentices with the above rule."

In order to harmonize our work with this regulation we require the completion of four years of high school work or its equivalent. While this is a much higher requirement than most schools demand, we feel that the results have justified our judgment, for at present there are but two of our graduates who have taken the state examination who are not registered.

This line of work offers many inducements to young men. The quests of the druggists of the state for our graduates are far in excess of the supply and the pure food and drug laws have opened up a new field for young men who are competent drug and food assayists.

The students finishing the two year course in Pharmacy may receive the degree of Pharmacy Graduate (Ph. G.). This is the only course of the kind offered in the state and receives the hearty commendation of the State Board of Pharmacy. The two years of pharmacy work may all be applied towards the degree of Bachelor of Science. For the additional subjects required, see Pharmacy Schedule. This longer course is recommended to those who intend to take up the study of medicine or dentistry, or who wish to prepare for teaching the sciences in the high schools of the state.

The fees for work in this department are the same as for other college work, i. e., six dollars tuition and two dollars for each laboratory period per semester.

The following subjects are all required for both the degree of Pharmacy Graduate and the degree of Bachelor of Science in Pharmacy.

1. **Pharmacy Latin.**—Five recitations a week, first semester, first year. The subject is taught with special reference to its application in pharmacy. The vocabulary employed is strictly pharmaceutical. Text: Crothers and Biers, Elements of Pharmacy Latin.

2. **Materia Medica.**—Five recitations a week, first semester, first year. Medicinal properties, doses and poisonous effects of the various medicines, together with the antidotes which the pharmacist may be required to administer in an emergency, will receive full and careful treatment. Text: Potter's Materia Medica, Pharmacy and Therapeutics.

3. **Materia Medica.**—Five recitations a week, second semester, second year. Continuation of Pharmacy 2.

4. **Pharmacy.**—Five recitations a week, first semester, second year; prerequisite, Chemistry 2. Forms and uses of pharmaceutical apparatus, weighing by apothecary and metric systems, specific gravity of solids and liquids, heating apparatus, determination of boiling and melting points, distillation, comminution, solution, precipitation, filtration, crystallization, percolation, and study of official medicines, waters, syrups, mucilages, mixtures, spirits, elixirs, liniments, infusions, tinctures, fluid extracts, oleoresins and extracts. Text: Remington's Practice of Pharmacy.

5. **Pharmacy Laboratory.**—Three laboratory periods a week, first semester, second year. Preparation of waters, syrups, mucilages, etc., mentioned in Pharmacy 4, must be taken up in connection with it. Text: Remington's Practice of Pharmacy.

6. **Pharmaceutical Problems.**—Two recitations a week, first semester, second year. Relationship of metric, apothecary, and imperial systems of weights and measures, specific gravity, specific volume percentage problems, concentration and dilution, alligation and chemical problems. Text: Olberg's Pharmaceutical and Chemical Problems.

7. **Pharmacy.**—Five recitations a week, second semester, second year; prerequisite, Pharmacy 4 and 5. Official inorganic salts and their compounds, solutions, emulsions, powders, pills, ointments, and plasters; reading prescriptions. Texts: Remington's Practice of Pharmacy, Ruddiman's Incompatibilities in Prescriptions.

8. **Pharmacy Laboratory.**—Five laboratory periods a week, second semester, second year; prerequisite, Pharmacy 5 and 6. Compounding of prescriptions, making of inorganic salts, solutions, emulsions, powders, pills; reading and compounding prescriptions. Must

be taken same semester as Pharmacy 7. Texts: Remington's Practice of Pharmacy, Ruddiman's Incompatibilities in Prescriptions. Olberg's 1,500 Prescriptions, National Formulary.

9. **Volumetric Analysis and Drug Assaying.**—Five recitations and laboratory periods a week, first semester, second year; also elective in the sophomore year of the General Science Course; prerequisite, Chemistry 3. There are at present in the U. S. Pharmacopoenia 149 volumetric and 35 gravimetric assays. In this subject we endeavor to give enough of this work to enable a student to make any of these assays in an intelligent and accurate manner. The students are required to make their own volumetric and indicator solutions. A short course in urine analysis is given in connection with this work. Texts: U. S. Pharmacopoeia, Schimpf's Volumetric Analysis, Lyons' Pharmaceutical Assaying; lecture notes by the teacher.

Department of Music

PROFESSOR HEDGE; ASSISTANT PROFESSOR PETERSON; ASSISTANT PROFESSOR CHRISTENSEN; MISS WELCH; MISS FERGUSON.

PURPOSE OF THE DEPARTMENT

The purpose of this department is to give the very best musical training possible at a minimum cost, without sacrificing the high standards of the institution.

It is generally recognized that few branches of study require greater and broader training of the mind than does the study of music, and not only cultivation of the mind, but of the emotions as well. The emotional is a phase too often neglected in education, although it has so important a part in life. In music one must learn to control—to keep in the background—one's own emotions, in order to give true expression to the thoughts of the master minds which have so wonderfully woven the beautiful harmonies.

A knowledge of music also serves to give proper balance to an education, the aesthetic side of which is too often neglected.

Our course is arranged with a view to supplying the needs more especially of those who wish to broaden themselves and to make it a part of their general education.

ADVANTAGES

Opportunities are given for the hearing of the best music during the school year, which is a most important adjunct to proper musical education. These occasions include our high-grade faculty concerts, and an Artists' course which consists of recitals by some of the best musicians of the country. It is also planned to bring one of the Symphony Orchestras here for a concert each season.

During the past school year the following concerts, oratorios, and recitals have been given under the direct supervision of the Department of Music: Evelyn Scotney Concert Company, Oct. 17th; Royal Gwent Welsh Singers, Oct. 27th; State College Symphony Orchestra Concert, Nov. 20th; "Messiah," by Choral Union, Dec. 11th; "The First Christmas," Cantata by Chapel Choir, Dec. 20th; Thirteenth Annual Band Concert, Jan. 22nd; Gilman-Anderson Violin and Piano Recital, Feb. 11; "Rose Maiden" and "Fair Ellen," by Choral Union, March 26th; Carl Christensen String Quartet Concert, March 28th; "Faust" in concert by Choral Union, assisted by Corps de Ballet, trained by Miss Fromme, May 15th; Annual Faculty Recital, June 7th.

The following are the artists who have appeared in concerts or recitals whose names are not mentioned above: Mme. Evelyn Scotney, Soprano of Boston Grand Opera Company; Howard White, Basso-Cantante of Boston Grand Opera Company; Eric Hayne, Violinist of Boston Symphony Orchestra; Herbert Seiler, Pianist, of Boston; Gustav Holmquist, Basso of Chicago; Wilmas Anderson- Gilman, pianist of Minneapolis; Ruth Anderson, Violinist, of Minneapolis; Dr. Ray R. Moorhouse, Baritone, of Minneapolis.

In addition to these advantages, Prof. Hedge will train and direct, free to all College students and to outside singers, a choral union, a chapel choir of twenty-four picked voices, a men's glee club, and a women's glee club.

One credit a year will be given to Juniors and Seniors for choral singing in either Choral Union or Chapel Choir, provided the work is carried the full school year.

Professor Christensen will conduct the College bands and orchestra, both of which have already made an excellent reputation throughout this part of the country.

The Men's Glee Club and Orchestra have made tours during the last three years through different parts of the state and have met with great enthusiasm and success.

Recitals are also required of all students at various times during the year and attendance is obligatory upon every student in this department.

CONDITIONS FOR ENTRANCE

The candidate for admission to the College must be at least fourteen years of age and of good moral character, and must have completed the work of the public schools as far as the ninth grade.

Students of music who have not completed the requirements for entrance to the freshman class will be required to take at the same time two text book subjects of the preparatory course.

STUDENTS' CONVOCATION

The Music Students Convocation meets once each month at which programs are given by students or faculty. As this is part of the school work each student of music is required to be present.

COURSES

Three courses are available for students of this department:

1. Preparatory.
2. Academic.
3. Collegiate.

The Preparatory Course is open to all beginners and consists of rudiments, tone production, formation of correct habits of thought and execution, etc.

The Academic Course is for those who do not desire to complete the full course, but only to become fairly proficient as performers and to secure a general knowledge of the fun-

damental principles of the art. At the completion of this course, the student is awarded a certificate of proficiency or merit.

The Collegiate Course leads to graduation and consists of three years' work. To complete this course, the student must have secured a thorough knowledge of harmony, theory and history as outlined in these respective courses. Upon its completion, the student will be given a diploma in music, provided the entrance requirements to the freshman class have been completed.

VOICE

PROF. HEDGE, MISS FERGUSON.

The method used is the correct placing of the voice so that the pupil can produce with equal ease and firmness and with an even quality, all tones from the lowest to the highest. The mechanism of the voice is explained as far as necessary.

In correct breathing, correct position in singing and chest development lies the foundation of voice building.

The course of instruction is based on the Italian School of training the voice. The fundamental principle of the old Italian teachers was to poise the voice. From this comes the even scale, the range, the power to sustain, and the agility, all of which combined formed the "bel canto" or beautiful singing.

Special attention is paid to the needs of each individual, with exercises and studies carefully selected according to the requirements of each voice.

Study will be made of the interpretation of songs and ballads chosen from the best of the German, Italian, French, English and American schools, with strict attention to phrasing, enunciation and rhythm.

Voice Outline

First Year	Second Year	Third Year
Vocal Culture	Vocal Culture	Vocal Culture
Piano	Piano	Song Literature
Sight Reading	Harmony	Harmony
Musical History	Languages	Oratorio, Opera Airs
Languages	Ear Training	Hymnology and Church Music
Songs	Songs	Theory

First Grade

The formation of tone; elementary exercises for the development of the voice and art of respiration; Seiber's thirty-six eight measure vocalises; exercises in articulation and art of phrasing; easy and pleasing songs in English.

Second Grade

Exercises in scales, precision and flexibility; studies by Lutgen, Concone, Tosti, Vacci; songs from German and English composers.

Third Grade

Exercises in scales, precision and flexibility continued; advanced vocalization; songs by Schubert, Schumann, Franz, Brahms, and arias and duets from operas.

Fourth Grade

Exercises continued as above with studies in bravoura singing. Exercises and solfeggios used, classified according to difficulty, are those of Concone, Marchesi, Lamberti and Brambilla. Recitatives and arias from the standard oratorios and operas.

For the Diploma in vocal music, the pupil must complete the courses in harmony, theory and history of music, ear training and sight reading, and must also complete the work of the academic course in instrumental music.

PIANO

MR. PETERSON; MISS WELCH; MISS FERGUSON.

The study of piano is conducted with a view to balancing more perfectly the training of the mind and the cultivation of technical power. Too often stress is placed upon one or the other, more frequently the latter, to an extreme. Technic is but the means to an end; i. e., the correct interpretation of the masters, and should be so considered.

Special attention is directed from the very beginning to the student's habit of thinking. This is done largely through the method of harmonic analyses and memorizing in an orderly and concentrative manner.

The musical side of the student's personality is brought into action through intelligent and artistic interpretation and

its development is materially assisted by his having the opportunity to hear good music, artistically rendered as often as possible.

In technical development, special work is given for the acquisition of finger strength and independence, a correct position of the hand and purity of tone. Since it is now generally believed that the purest and sweetest tones are secured from direct finger action, this is much emphasized throughout the course.

These fundamental ideas are associated with the principle, the understanding of which is so necessary to the successful teacher, that effort should continually be made to render the study of the piano less irksome and as intensely interesting to the student as it can be made.

Piano Outline

First Year	Second Year	Third Year
Piano	Piano	Piano
Harmony	Harmony	Harmony
Musical History	Violin or Voice	Violin or Voice
Musical Literature and Analysis	Ear Training	Ensemble Playing
	Theory	

Preparatory Course

Studies from Czerny, Gurlitt, MacDougall, Bach and other composers; sonatinas from Clementi, Kuhlau, Gurlitt, etc.; the easier sonatas of Haydn and Mozart, and the less difficult compositions of Schumann, Grieg, MacDowell, Schubert, Chopin and others.

Collegiate Course

First Year.—Etudes of Heller, Czerny, Foote, Loeschhorn; selections from the Bach suites and sonatas of Beethoven, Haydn and Mozart; compositions of Mendelssohn, Schubert, Chopin, Schumann, Grieg, MacDowell, etc.

Second Year.—Studies from Bach, (inventions and suites), Heller, Czerny, and others; sonatas of Mozart and Beethoven; solos selected from Weber, Chopin, Mendelssohn, Schumann, Grieg, MacDowell, Liszt and others; also some of the easier concertos of Mendelssohn, Reinecke, Weber, Mozart, etc.

(For examination last year, students played a movement from Weber's Concerto in C Major, a Bach invention or prelude and an

expression piece selected from some of the composers of the Romantic School.)

Third Year.—Studies from Bach (Well Tempered Clavichord), Chopin, Liszt, Foote; sonatas of Schubert, Beethoven, Grieg, Weber, Chopin; solo works of Mendelssohn, Weber, Schumann, Liszt, Rubinstein, Grieg, MacDowell and the modern French, Russian and American composers; concertos of Beethoven, Rubinstein, Chopin, Schumann, Saint Saens, etc.

VIOLIN

MR. CHRISTENSEN.

Position, tone production on open strings, most important rudiments of musical theory in general, Hohmann's Violin School, Book 1; duets by Gebauer and Mazas; miscellaneous solos with piano accompaniment.

Collegiate Course

First Year.—Two octave scales in all major and minor keys; Sevcik, Opus 1, Book 1, Violin Technic; study of the positions, Hohmann, Book IV; studies by Wohlfart, Opus 45, Books I and II; miscellaneous solos with piano accompaniment.

Second Year.—Three octave scales in all major and minor keys; Sevcik, Opus 7, Violin Technic, Books I and II; Sevcik's "Four Thousand Bowings;" Kayser's Etudes, Opus 20, Books I and II; Mazas, Opus 36, Book 1, Violin Studies; solos with piano accompaniment by DeBeriot, Wieniawski, Mendelssohn, etc.

Third Year.—Sevcik, Opus 7, Books I and II; Sevcik's "Four Thousand Bowings"; Schradieck's Technical Studies; Mazas Studies, Opus 36, Book II; etudes by Dont and Kreutzer; solos by Wieniawski, Vieuxtemps, Mendelssohn, Bruch, Godard, etc.; concertos by Viotti, De Beriot, etc.

Violin or Violoncello Outline.

First Year	Second Year	Third Year
Violin or Cello	Violin or Cello	Violin or Cello
Harmony	Harmony	Harmony
Piano	Piano	Ensemble Playing
Musical History	Musical Literature and Analysis	
	Ear Training	
	Theory	

HARMONY

MR. PETERSON.

In the study of harmony, the older ideas of harmonizing a given melody or figured bass are discarded as far as possible.

The student is taught from the beginning to write his own melodies for harmonization, thus, while stimulating his originality and inventive ability, taking from the study of harmony that mechanical and superfluous aspect so often too apparent to the pupil, and firmly establishing its proper place in the study of music.

In the first year (collegiate) the student receives ear training and the rudiments of harmony, including intervals, scales and chord formation, chords and their tonal relations, melody writing and simple harmonization.

In the second year, melody writing is continued, harmonization a little further developed, new chords introduced, etc.

The third year leads to altered chords and modulation, elaboration of melody, imitation, counterpoint, canon, fugues and composition in the easier forms.

This study is generally conducted in classes of four or five, but those who desire quicker advance may secure private lessons at special rates, according to the statement upon another page.

HISTORY

The classes in the study of musical history are conducted by Miss Welch. This clearly follows the development of music and musical instruments from the earliest to the present time. This is a subject upon which every musical student should be well grounded, and some knowledge of it is essential in the general education equipment of everyone who is at all musically inclined. An examination upon this subject must be passed by all students before receiving certificates or diplomas.

THEORY

The study of theory is conducted by Mr. Peterson. This study includes the principles of acoustics and formation of sound, together with a study of analysis of musical forms; simple songs, forms, arias, ballads, and other vocal forms; the more simple forms of dance music, leading to the higher forms of the sonatina and sonata, canon, fugue, etc.

This study is also required of all students receiving certificates or diplomas.

EAR TRAINING

A special class in ear training and sight reading is to be included in the course for the coming year, to be conducted by a capable and experienced teacher. This study will be required of all music students.

EXPENSES OF STUDENTS

The tuition for regular work throughout the year is listed in the table of fees below and depends upon the instructor, subjects studied, etc.

The terms and prices to the student of the five months' course in Agriculture will be the same as that for the regular semester, as given below.

FEES

The following fees will be charged a semester for instruction:

Prof. Hedge

Voice—

Two half hour lessons per week, major work.....$32.00
One half hour lesson per week, minor work..... 18.00

Mr. Christensen

Violin, Viola, Cello and Band Instruments—

Two half hour lessons per week, major work $28.00
One half hour lesson per week, minor work..... 17.00

Mr. Peterson

Piano—

Two half hour lessons per week, major work $28.00
One half hour lesson per week, minor work..... 17.00

Miss Welch

Piano—

Two half hour lessons per week, major work.....$26.00
One half hour lesson per week, minor work 15.00

Miss Ferguson

Voice and Piano—

Two half hour lessons per week, major work.....$26.00
One half hour lesson per week, minor work 15.00

Harmony, history, theory, ear training, sight reading, etc., in classes, free to all students in voice, piano or violin.

Private lessons in harmony may be obtained for the additional fee of $10.00 a semester. Students desiring private lessons in harmony and studying in more than one department, for example, both voice and piano departments, will be given a discount of $5.00 a semester to cover the free theoretical work to which they are entitled in each of these departments.

Practice pianos may be used at the following rates a semester:
One hour a day, $4.00.
Two hours a day, $7.00.
Three hours a day, $9.50.
Four hours a day, $12.00.

Department of Art

MISS CALDWELL; MISS GODDARD.

The aim in arranging the subjects in this department has been to offer such work as will correlate with other college courses in becoming a means to a general education.

The object of the work is to cultivate an appreciation of beauty and to develop technical skill.

The department is equipped with a good collection of casts and photographs and with such tools as are necessary for class work.

Two courses of study are offered, the preliminary work in each being the same. One course includes the study of form and color, and the other the principles of design and their application in various crafts. A diploma is given students who satisfactorily complete either course. The time necessary to secure a diploma depends on the ability of the student, three years being an average length of time, although the work may be extended over a longer period and carried with a regular college course. The course in academic drawing and painting includes drawing from cast and still life, painting and art history, (courses 6, 7, 8, 9, 10, 11, 12, 13). The course in applied design includes a year of drawing, two years of design and handicraft, with a year of art history, (courses 4, 5, 6, 7, 8, 9).

Any advanced student wishing to study the technique of pen and ink will be given individual instruction in that subject.

For Art 1 and 2 see the preparatory department.

3. **Theory of Design.**—Two recitations a week, second semester; required in the sophomore year of the Home Economics Course. This subject treats of the principles of design and their practical application in the home.

4-5. **Applied Design.**—Two laboratory periods a week, first and second semesters; required in the senior year of the Home Economics Course; elective in the senior year of the General Science Course; prerequisite, Art. 1. One period a week for lecture and criticism of original designs and three periods for the working out of these designs in the various crafts of basketry, stenciling, weaving, leather, woodcarving, metal work and jewelry. Students wishing a diploma are required to continue the study of design for a second year and study the principles of the crafts they have not included in their first year's study of applied design.

6. **Art History.**—Two recitations a week, first semester; required in the senior year of the Home Economics Course, elective in the senior year of the General Science Course. This course aims to acquaint the student with the styles of historic architecture and with prominent buildings illustrative of each style.

7. **Art History.**—Two recitations a week, second semester; required in the senior year of the Home Economics Course, elective in the senior year of the General Science Course. A study of great schools of painting. Reference books in the general library and a collection of photographs in the department furnish material for this course.

8. **Charcoal Drawing.**—Five hours a week, first semester; elective to students pursuing special work in art. Drawing from simple casts in outline and in light and shade.

10. **Charcoal Drawing.**—Five hours a week, first and second semesters; elective to students pursuing special work in art. Drawing of heads and figures in full light and shade from casts, sketching from pose; prerequisite, Art 8.

11. **Study of Values.**—Five hours a week, first semester; elective to students pursuing special work in art. Value studies in charcoal from still life as preparatory work for painting; prerequisite, Art 1-2.

12-13. **Painting.**—Two laboratory periods a week, first and second semesters; elective to students pursuing special work in art; prerequisite, Art 8. Study of color and technic of painting in oil, pastel, and water color from still life and flowers.

14. **Drawing.**—Two laboratory periods a week; required in the freshman year of the Home Economics Course. This course will include object and nature drawing with pencil and pen and ink, for the study of proportion, perspective, light and shade, and pencil and pen technic, thus enabling the student to express the appearance of objects.

15. **Theory of Design and Handicraft.**—Basketry and stenciling. Students are required to work out their own designs for each problem.

15a. **Theory of Design and Handicraft.**—Leather tooling and weaving. Planning of designs and color harmonies for all problems.

16. **Design for Needlework.**—One hour a week, first semester. This work is offered in connection with the course in needle craft in the Home Economics Department.

Department of Military Science and Tactics

LIEUTENANT DITTO, Commandant.

The work of this department is conducted in accordance with War Department orders promulgated pursuant to Acts of Congress.

Instruction in military science and tactics in educational institutions throughout the United States forms a part of the present general system of military training; its function is to impart to the college youth of the land knowledge of the elements of military science and the duties of the soldier in the garrison and in the field in order that the people may receive the benefit of more efficient service when final resort to arms to sustain the national honor or to enforce the laws shall become necessary.

Direct benefits of lasting value are received by the individual cadet which contribute to strengthen his physique and mentality, the better to fit him for the duties of life.

The instruction is both practical and theoretical, as follows:

PRACTICAL.

Infantry drill regulations; firing regulations for small arms; field service regulations; manual of guard duty. Three hours a week; required of all able bodied male students of the sophomore, freshman and preparatory classes, the school of agriculture, and special students; optional for seniors and juniors, who may elect further work in the department subject to approval; they may also be required to turn out on special occasions by direction of the commandant upon approval of the president.

THEORETICAL—REQUIRED.

Infantry drill regulations; firing regulations for small arms; field service regulations; manual of guard duty; army regulations. This course is progressive and required for commissioned and non-commissioned officers, one hour a week, one semester, or equivalent. Lectures by the Commandant on various military subjects will be delivered monthly before all cadets. Elements of Military Science; additional requirement for sophomores, one hour a week, second semester.

THEORETICAL—ELECTIVE.

Field Service Regulations and Military Engineering. Junior year, first semester, one hour a week.

Applied Tactics. Junior year, second semester, one hour a week.

Military Law. Senior year, first semester, one hour a week.

International Law. Senior year, second semester, one hour a week.

Further advanced work may be elected with appropriate credit, subject to the approval of the faculty.

All students herein referred to constitute the corps of cadets and are organized for the purpose of drill and administration as an infantry battalion, with a band to which qualified cadets are specially assigned.

The appointment and promotion of commissioned and non-commissioned officers are made in accordance with merit by the commandant subject to the approval of the president.

The College is provided by the U. S. government with the equipment necessary to conduct the department. Each cadet must provide himself with the prescribed uniform. The complete uniform will be worn at all drills and other exercises.

The following is an extract from war department orders: "Upon the graduation of every class, the professor of military

science and tactics, after consultation with the president of the college * * *, will decide upon and report to the Adjutant General of the Army the names of such students belonging to the class as have shown special aptitude for military service, and will furnish a copy of his report to the Adjutant General of the state for his information."

Department of Commerce

PROFESSOR SCHLATTER.

The department of commerce offers two courses of study:

(1). The Secretarial Course for students who have completed a high school course of three or more years. The work of the course may be counted towards the completion of the entrance requirements to the freshman year of the college, under certain restrictions imposed by the committee on entrance requirements—and also depending upon the additional work that has been done by the student. However, it frequently happens that such students have no intention of pursuing a regular collegiate course of study, but are obliged by force of circumstances to take a one-year's business course preparatory to office work. These students welcome the opportunity of securing a commercial education in a college atmosphere.

(2). The regular commercial course combines preparatory subjects with business branches and covers a period of four years. This course is valuable to the student who desires to obtain a broad general knowledge with his commercial training. The student also gets regular credit for the work toward admission to the freshman year of college, in case he wishes to continue his education. Many students, in fact, take the business subjects in order to learn some method of earning their future college expenses.

All stenographic courses are so arranged that students are given considerable actual office practice during the second semester just before completing the course. The idea is to train the student for immediate service in office work, and to minimize the customary bungling of the "beginner."

Positions. The demand for our graduates far exceeds the supply. Hardly a week passes that we are not asked to recommend some young man or woman for office work. There are usually three to five positions for every student.

Brookings is now a regular point for the holding of Civil Service examinations. Students who desire to take the examinations are

encouraged to do so and are given all the preparation possible.

Those who have not completed the equivalent of at least three years of a high school course should follow the course in commercial science as outlined in the schedule of the preparatory department. Shorthand students are required to have had a preliminary English training of about three years.

Under certain restrictions, collegiate students are permitted to take electives in Business Law, and Theory of Money and Banking.

THE SECRETARIAL COURSE

FIRST SEMESTER.

Business Law.—Three recitations a week. This subject includes practical analysis of contracts; negotiable paper; agency; partnership and corporations; personal and real property; surety, guaranty and insurance; the management of decedents' estates. Lectures and text-book work supplemented with the study of actual cases. Special lectures by local and visiting attorneys.

English.—Three recitations a week. Either freshman rhetoric or the English of the fourth preparatory year. This is to give practice in composition, supplemented with reading. This course is intended to develop the power of writing correct English.

Shorthand.—Five recitations a week. Theory, drills to develop ability in writing sounds. Study of word-signs; simple dictation. Gregg system.

Typewriting.—One hour a day. Drills for learning keyboard by touch method; business and legal forms; manifolding and letter press; mimeographing; care of machine. Each student will be made familiar with standard typewriters.

Accounting.—Three double periods a week. A brief course to acquaint the student with the elements of business bookkeeping, the knowledge of which is essential, whether actually used by the student or not.

SECOND SEMESTER.

Money and Banking.—Three recitations a week. A theoretical and practical study of money and credit funds; their instruments of transfer; the commercial bank; savings bank; trust company; organization and operation of various banking institutions; legal regulations. A practical course not usually given in commercial schools.

English.—Three recitations a week. A continuation of the first semester's course. Too thorough a study of English cannot be made by the student who expects to become a first-class secretary.

Shorthand.—Five recitation periods a week. A practical continuation of the work of the first semester. Dictation, including all

forms of correspondence and legal matter; polite letter writing; terse business diction; special practice anticipating certain office work or civil service.

Typewriting.—Five to ten hours a week. To be taken in connection with the Shorthand.

Secretary Practice.—Five laboratory periods a week. Afternoon practice with college officers or business firms in town. Each student will be carefully "checked up" on this work. The practice will be of great value in giving preliminary experience, and will remove the fear of entering the first regular office work upon graduation.

THE REGULAR COMMERCIAL COURSE.

The following subjects are offered in the regular four-year course in commercial science. For complete schedule see outline of preparatory course.

1. **Commercial Correspondence.**—Three periods a week, first semester. A practical course designed to teach the student to write creditable and up-to-date business letters in natural and conversational English. Particular attention will be paid to penmanship.

2. **Commerce and Industry.**—Three periods per week, second semester. Continuation of work of first semester; study of industry and commerce, local, national, and international. This course will be illustrated by the use of a commercial museum now being collected. The student will be required to learn the use of government reports and other sources of information in collecting data.

3. **Bookkeeping.**—Three laboratory periods per week, first semester. Single and double entry studied as in actual business; the aim being to acquaint the student with the fundamental principles of bookkeeping. Students who are deficient in penmanship will be required to take course 1.

4. **Bookkeeping.**—Three laboratory periods per week, second semester. Advanced bookkeeping, affording practice with the more complex books and forms used in modern offices. Special attention given to the accounting books of commission, general merchandise, wholesale and retail business, manufacturing and banking. By the use of separate price lists, each student will be obliged to do independent study and thinking. In this course the student becomes familiar with the uses of various kinds of commercial paper and office practice.

5. **Shorthand.**—Five recitations per week, first semester. In this course the student masters the theory of shorthand; dictation of

simple business letters to develop facility in handling writing materials; drills on principles, characters and word-signs. Gregg shorthand is taught. Nothing but the very best work is accepted, for it is time wasted to prepare second and third rate stenographers for office work.

6-8. **Typewriting.**—Five periods a week, first semester. Five to ten periods a week, second semester. Graded exercises to learn machine by touch method; care of machine; correspondence and legal forms; manifolding and mimeographing; billing and tabulating. The work of the second semester will be based upon shorthand dictation. The student will be required to develop the ability to read and transcribe his notes readily and accurately. Each student is to collect a portfolio of his typewritten work which has been accepted by the instructor of typewriting.

7. **Shorthand.**—Five recitations per week, second semester. Dictation of business letters and general matter to develop speed; legal forms; civil service matter. The student is not allowed to develop speed carelessly, at the expense of legibility. With this course, the student makes a study of commercial correspondence and the most approved forms in letter composition. All dictated matter is transcribed on the typewriter.

9. **Business Law.**—Three recitations a week, first semester. Designed to acquaint the student with the fundamental principles of business law, supplemented with a study of actual cases illustrative of these principles. A topical analysis of contracts; negotiable paper; agency; partnership; corporations; guaranty; sale of chattels; stoppage in transit; payment; law of tender; liens; bailment; insurance; probate matters and real estate conveyances.

10. **Money and Banking.**—Three hours per week, second semester. A theoretical and practical study of the history of money; nature and uses of money; classification of banks; bank circulation; deposits and loans; officers of banks; collections; reserves; legal regulations; clearing houses; loan and trust companies. Open to seniors, secretarial, and college students only.

Preparatory Department

PROFESSOR FORSEE.

For the benefit of students who do not have high school advantages a preparatory department is maintained. This course, whose work extends over four years, contains certain

required subjects that are considered necessary to a liberal education. The remaining work may be chosen from a large list of elective subjects. The student who pursues the course may thus secure a good preparation for entering upon more advanced work or training for practical life.

The course conforms to the admission requirements as far as the conditions in the College permit. Students will be admitted to the college courses upon the completion of the required subjects and an additional amount of work chosen from the elective subjects to make fifteen units, a unit being five hours a week throughout the year. This requires about three hours of elective work a week in addition to the required subjects during the four years.

PREPARATORY COURSE.

First Year

First Semester—

English Composition, a 5	English	1
Arithmetic (Including Metric System), a 5	Mathematics	1
Civics, a 5	History	2
Business Correspondence and Penmanship, a 3	Commerce	1
or		
Freehand Drawing, b 3	Art	1
Military Tactics, 3		
Elective, a & b 3		

Second Semester—

English Composition, a 5	English	2
Beg. Algebra, a 5	Mathematics	2
Physiography, a 4	Physiography	1
Commerce and Industry, a 3	Commerce	2
or		
Freehand Drawing, b 3	Art	2
Military Tactics, 3		
Elective, a & b 3		

For list of preparatory electives, see the following pages.

Second Year

First Semester—

English Composition and Rhetoric, a 5	English	3
Algebra, a 5	Mathematics	3
Elementary Biology, a 3, b 2	Entomology	1
Military Tactics, 3		
Elective, a & b 3		

Second Semester—

English Composition and Rhetoric, a 5 .....English 4
Algebra, a 5 .....Mathematics 4
Elementary Biology, a 3, b 2 .....Entomology 2
Military Tactics, 3 .....
Elective, a & b 3 .....
For list of preparatory electives, see the following pages.

Third Year

First Semester—

American Literature, a 4 .....English 5
Plane Geometry, a 4 .....Mathematics 5
German, a 5 .....German Pr 1
Greek History, 3 .....History 3
Military Tactics, 3 .....
Elective, a & b 3 .....

Second Semester—

American Literature, a 4 .....English 6
Plane Geometry, a 4 .....Mathematics 6
German, a 5 .....German Pr 2
Roman History, a 3 .....History 4
Military Tactics, 3 .....
Elective, a & b 3 .....
For list of preparatory electives, see the following pages.

Fourth Year

First Semester—

English Literature, a 3 .....English 7
Elementary Physics, a 3, b 2 .....Physics 1
German, a 5 .....German Pr 3
English History, a 3 .....History 5
Military Tactics, 3 .....
Elective, a & b 3 .....

Second Semester—

English Literature, a 3 .....English 8
Elementary Physics, a 3, b 2 .....Physics 2
German, a 5 .....German Pr 4
American History, a 3 .....History 6
Military Tactics, 3 .....
Elective, a & b 3 .....
For list of preparatory electives, see the following pages.

PREPARATORY ELECTIVES.

First and Second Years.

First Semester—

Freehand Drawing, b 3 .....Art 1

Carpentry, b 3 ..... Mechanical Engineering 1
Elementary Agriculture, a 3 ..... Agriculture 1
Sewing, b 3 ..... Home Economics 1
Bookkeeping, b 3 ..... Commerce 4
Business Correspondence, a 3 ..... Commerce 1
Typewriting, b 2 ..... Commerce 6

Second Semester—

Freehand Drawing, b 3 ..... Art 2
Forging, b 3 ..... Mechanical Engineering 2
Elementary Agriculture, a 3 ..... Agriculture 2
Cooking, b 3 ..... Home Economics 2
Bookkeeping, a 3 ..... Commerce 4
Typewriting, b 2 ..... Commerce 8
Commerce and Industry, a 3 ..... Commerce 2

Third and Fourth Years.

First Semester—

Freehand Drawing, b 3 ..... Art 1
Sewing, b 3 ..... Home Economics 1
Carpentry, b 3 ..... Mechanical Engineering 1
*Shorthand, a 5 ..... Commerce 5
Elementary Agriculture, a 3 ..... Agriculture 1
Typewriting, b 3 ..... Commerce 6
Elementary Physiology, a 2, b 1 ..... Zoology 1
Mechanical Drawing, b 3 ..... Mechanical Engineering 5
Business Law, a 3 ..... Commerce 9
Bookkeeping, b 3 ..... Commerce 3

Second Semester—

Freehand Drawing, b 3 ..... Art 2
Cooking, b 3 ..... Home Economics 2
Bookkeeping, b 3 ..... Commerce 4
Forging, b 3 ..... Mechanical Engineering 2
Mechanical Drawing, b 3 ..... Mechanical Engineering 5
Typewriting, b 3 ..... Commerce 8
*Shorthand, a 5 ..... Commerce 7
Elementary Agriculture, a 3 ..... Agriculture 2
Elementary Physiology, a 2, b 1 ..... Zoology 2
Money and Banking, a 3 ..... Commerce 10

*Students taking Shorthand will be allowed to substitute typewriting for Greek History and Roman History, or for English History and American History.

School of Agriculture

PROFESSOR STIVERS.

The School of Agriculture has for its specific purpose the training of young people for the life and work of the farm and home, for the social life of the rural community and for American citizenship.

The farmers' boys and girls are often needed on the farm and in the homes to help the parents during the busy season of the year. They can usually be spared from such work during the winter season, and may well spend this time in study which will prepare them for practical, profitable farming and successful home management.

While the subjects of study consist primarily of those that relate to farming and household economy, they include also such subjects as are usually given in a regular high school course. For example, English, mathematics, history, civics, chemistry, physics and biology. The technical topics include studies in soil, plants and crops, domestic animals, feeds and feeding, cooking and sewing, laundering, farm and home management, records and accounts, carpentry and blacksmithing. Text books are used when these aids best answer the purpose. Lectures are given in the subjects which can be most efficiently taught in this way. Demonstrations are given in the class rooms, laboratories, kitchen and sewing rooms, barns, greenhouses, orchards and fields.

The School of Agriculture welcomes earnesty and worthy young men and women from all parts of the state who have passed the eighth grade in the public schools and are willing to work in such a course of mental and manual training as will prepare them for life's labors, on the farms and in the homes of South Dakota.

The tuition is six dollars for the year, with a small fee for each laboratory in which work is taken.

COURSES OF STUDY

Following are the schedules of the courses of study. The academic studies are practically the same for men and women. The courses are differentiated only in such points as are related to their specific spheres in life's work.

FOUR YEAR COURSE FOR YOUNG MEN

Note: The small letters and numerals after the names of subjects indicate the character of the work and the number of times a week, "a" meaning class work, "b" laboratory work.

Penmanship and Spelling	a 2
English	a 4
Arithmetic or Algebra	a 4
Poultry Culture	a 2
Farm Crops	a 3, b 2
Stock Judging	b 2
Horticulture	b 1
Carpentry	b 3
Lectures on Science	a 2
Military Drill	3

Second Year

Biology	a 5
Farm Accounts	b 1
English	a 4
Algebra	a 4
Dairying	a 1, b 2
Horticulture	b 1
Blacksmithing	b 3
Military Drill	3

Third Year

Civics	a 3
Elementary Chemistry	a and b 4
English	a 4
Plane Geometry or Algebra	a 4
Farm Machinery	a 2
Entomology	a 1, b 1
Stock Feeding	a 5
Military Drill	3

Fourth Year

History (includes lectures on Co-Operation)	a 4
English	a 4
Elementary Physics	a 2, b 2
Physiology	a 1, b 1
Veterinary Science	a 3
Soils	b 3
Breeds and Breeding	a 2, b 1
Military Drill	3

FOUR YEAR COURSE FOR YOUNG WOMEN.

First Year

Penmanship and Spelling ..... a 2
English ..... a 4
Arithemtic or Algebra ..... a 4
Freehand Drawing ..... a 4
Poultry ..... b 2
Cooking ..... a 2
Sewing I ..... a 1, b 3
Dairying ..... b 3
Horticulture ..... b 1
Lectures on Science ..... b 1
Physical Training ..... a 2
..... 3

Second Year

Biology ..... a 5
Farm Accounts ..... b 1
English ..... a 4
Algebra ..... a 4
Food, Dietetics and Serving ..... a 4
Household Management ..... a 1, b 2
Art Needlework ..... a 1
Craft ..... b 2
Physical Training ..... b 1
..... 3

Third Year

Civics ..... a 3
Elementary Chemistry ..... a and b 4
English ..... a 4
Plane Geometry or Algebra ..... a 4
Textiles and Sewing II, Laundering ..... a 4
The House ..... a 1, b 3
Craft ..... a 2
Physical Training ..... b 1
..... 3

Fourth Year

History (includes lectures on Co-Operation) ..... a 4
English ..... a 4
Elementary Physics ..... a 2, b 2
Physiology ..... a 1, b 1
Sewing III and Millinery ..... b 2
Advanced Cookery and Invalid Cookery ..... a 1, b 2
Home Nursing and Emergencies and Care of Children ..... a 2
Physical Training 3

The Summer School

PROFESSOR STIVERS, Director.

For a number of years the College has conducted a short summer session in conjunction with the Brookings County Teachers' Institute. In 1914 the College authorities felt that the time had come for the College to extend its summer work to a session of six weeks. The results were very gratifying, for after the close of the teachers' institute, a large number of students remained to continue their work in the College.

The work of the summer session was planned especially for those who might wish to take work along industrial lines—in Agriculture, Manual Training, Home Economics and allied subjects—either for the purpose of preparing themselves to teach in the public schools, or to secure College credits. The College offers many advantages to the public school teachers of the state. During the last few years the demand for teachers of vocational subjects has increased much more rapidly than the supply. Here the student has the opportunity of getting practical training along with the theoretical work by having access to the laboratories, shops, and other equipment of the College.

In addition to the members of the regular College staff a number of special instructors and lecturers were employed to give instruction during the session. Among these were the following: Gertrude Stedman, Superintendent of Schools, Brookings County, Rural Methods; Ada M. Pratt, Deputy Superintendent of Schools, Brookings County, Grammar; Georgia B. Elwell, Teacher Domestic Art, East High School, Minneapolis, Domestic Art; H. C. Johnson, Ph. B., A. M., Superintendent of Schools, Aberdeen, S. D., American Literature, South Dakota History and Grammar; Mrs. Hattie Moore Mitchell, Supervisor of Primary Work, Drake University, Primary Methods and Drawing; Mrs. Myra K. Peters, Supervisor of Music in Public Schools, Lead, S. D., Public School Music and Folk Dancing; F. E. Brown, Professor of Public Speaking, Drake University, Methods in Reading;

Henry S. Curtis, Ph. D., Former Supervisor of Playgrounds, Washington, D. C., Organized Play; F. F. Von Court, Palmer School of Penmanship, Cedar Rapids, Ia., Penmanship and Farm Accounts; Dr. P. P. Claxton, United States Commissioner of Education, Washington, D. C.; J. Adams Puffer, Director Beacon Vocation Bureau, Boston, Mass.; William McKeever, Professor of Education, Kansas State College; Dr. B. H. Hibbard, Professor of Rural Economics, University of Wisconsin; C. G. Lawrence, Superintendent of Public Instruction, Pierre, S. D.; Prof. H. I. Jones, Dakota Wesleyan University, Mitchell, S. D.

During 1915 the summer session of six weeks will begin June 7th. In connection with the session, a joint institute of Hamlin, Beadle, Moody, Miner and Brookings counties will be held, beginning June 7th and closing June 18th. Those wishing detailed information concerning it should write to the President for the Summer School Bulletin.

Short Industrial Courses

Special work is offered in the various industrial departments for the benefit of those who can not avail themselves of the opportunities offered in the longer courses. These short courses are becoming a very attractive and profitable feature in the lives of many who can get away from their homes only at the time of the year when the work is offered, and persons of all ages, young and old, are found working side by side in these classes, to improve the conditions of their lives in the home and on the farm. A special effort is put forth to make the work interesting and specialists from other institutions are often engaged to assist in the instruction.

Since much of this work is adapted to the needs of the persons enrolled for it, the courses cannot be very fully described here. For a more detailed description of any particular work, address inquiries to the department concerned or to the President of the College.

The different courses are mentioned below:

THE FARM AND HOME COURSE

December 27 to January 1.

This course will consist of lectures on judging live stock, stock breeding, stock feeding, corn judging, grading and cleaning grain, poultry management and kindred subjects.

ONE WEEK COURSE FOR CREAM TESTERS.

December 13 to December 17.

During the past few years there has been a demand for a short course giving instruction in testing cream for butterfat and per cent acidity, and as to the proper method of handling cream. This demand has come largely from cream buyers. Since the state law, which requires all operators of the Babcock test to pass an examination and take out a license, went into effect, the requests for such a course have increased.

To fill this want the Dairy Husbandry Department will give a one week course. The fee will be two dollars. Opportunity for examination will be given immediately after this course. All licenses expire January 1.

THE THREE MONTHS' CREAMERY COURSE.

January 5 to March 31.

This course is especially designed for young men wishing to fit themselves for various positions connected with the creamery industry such as helpers, buttermakers, managers, inspectors, etc.

Prospective students are urged to get at least six months of practical experience in some creamery before attending College, as by this means it is found that much greater benefit is derived from the work at the school.

The more general application of scientific principles to the manufacturing industries as well as the increasing competition on all sides demands a more thorough training in scientific and business methods than heretofore. This is no less true with regard to the creamery industry, and while the practical work of the school is by no means neglected special pains are taken to teach the underlying principles and the

"reason why" for many of our daily operations. The increasing interest in dairying in South Dakota and the consequent multiplication of creameries are creating a demand for men well trained along dairy lines, and applications for such are constantly being received at salaries varying from $50 to $125 per month. Worthy students may count on the co-operation of the dairy department in helping them to secure positions at the close of their college work.

The following work is offered:

Factory buttermaking and creamery management.
Testing milk and its products.
Dairy bacteriology.
Dairy arithmetic and bookkeeping.
Breeding, feeding and management of dairy cattle.
Agronomy.
Veterinary Medicine.
Creamery Mechanics.

The tuition is four dollars for the three months' term with a small additional fee for laboratory expenses.

A certificate of standing will be issued to all students passing satisfactory examinations on the above subjects.

COURSE IN TRACTION ENGINEERING.

January 5 to June 2.

Modern agricultural methods have introduced the steam and gas engine, as a substitute for animal power, in such a marked degree, that the consequent growing demand for traction engineers has led the College to arrange a five months' course for the special training of such engineers. Extreme care has been taken to offer only such work as will prove valuable to the man running the traction engine and other machinery. A relatively large amount of shop work and engine practice is introduced.

For the work in engine practice several of the most modern types of both steam and gas traction engines are available. Enough time is devoted to this part of the work to make each student thoroughly familiar with all of the engines, and able

to operate them satisfactorily in actual practice. The engine practice work generally starts as soon as the frost is out of the ground, or about April 10th, and continues to the end of the term.

A proper proportion of recitations in closely allied subjects is also included in this course.

The tuition is eight dollars for the entire course with a small amount extra for laboratory fees.

Upon the satisfactory completion of the work the student is given a certificate which is virtually the same as a license to run an engine in this state.

Students who desire to take this course are expected to pass a satisfactory examination in arithmetic, to read intelligently and to show such general elementary training as will indicate that they are able to understand the subjects embraced in this course.

The work offered is as follows:

Arithmetic	a	5
Heat Engines and Elementary Physics	a	5
Stock Judging or Civil Government	a	2½
Steam and Gas Engine Lectures	a	2½
Forging	b	2½
Mechanical Drawing	b	2½
Engine Practice	b	2

College Alumni

ALUMNI ASSOCIATION.

E. H. Sexauer, '10 .....President
H. H. Hoy, '96 .....First Vice-President
Manley Champlin, '09 .....Second Vice-President
Vey Valentine, '14 .....Third Vice-President
H. B. Mathews, '92 .....Secretary and Treasurer

Class of 1886.

BACHELOR OF SCIENCE.

Sayler, Marcus A. .....Fruit Grower, Orland, Cal.

Class of 1888.

BACHELOR OF SCIENCE.

Aldrich, John M. .....
With U. S. Bureau of Entomology, 238 S. Grant St., Lafayette, Ind.
Lawrence, Philip A. .....Attorney, Fargo, N. D.
Wellman, Lulah (Hewes) .....Lakewood, N. Y.

Class of 1889.

BACHELOR OF SCIENCE.

Boswell, Katie (Arnold) .....Kennebec
Cranston, Mary (Crane) .....04303 Lincoln St., Spokane, Wash.
Cross, Alvah G. .....
Eno, Durell G. .....Merchant, Platte
Grady, Francis A. .....Attorney, Crookston, Minn.
Haber, Sarah (Cunningham) ....1015 Grand Blvd., Spokane, Wash.
Korstad, Hans .....Rural Mail Carrier, Brookings
Larson, Lars K. .....Bank Cashier, Dell Rapids
Lawshe, Grace (Brooke) .....
.....Cashier Dept. Store, 1649 Ashland Ave., St. Paul, Minn.
McKenney, Duston W. .....
..Supervisor Manual Training, 302 Lewis Ave., Billings, Mont.
McLouth, Lewis C., Gen. Mgr. Miniature Sales Co. .....
.....1228 Chamber Com., Detroit, Mich.
Mork, Albert A. .....Farmer, Grelland, N. D.
Roe, Ellen (Aldrich) .....Died Dec. 8th, 1897, at Helena, Mont.
Rogers, Edmund ....Machinist, 104 Eleventh St., Milwaukee, Wis.
Ross, Carrie (Orcutt) .....518 W. Third St., Northfield, Minn.
Ross, Abbie (Wesche) .....Webb, Ia.
Wardall, Anna (Scott) .....
.....Osteopath, 3201 Forty-first Ave., S. W., Seattle, Wash.

Class of 1890.

BACHELOR OF SCIENCE.

Allen, William C. .....Died in Chicago
Day, John M. .....Farmer, Ekalaka, Mont.
Duffey, Maggie (Irish) .....4206 Castleman Ave., St. Louis, Mo.
Egeburg, Hildus .....Farmer, Brookings
Haasarud, Ole H. .....Farmer, Bratsburg, Minn.
Harkins, Lilla A., Prof. of Dom. Science.....
.....Montana Agricultural College, Bozeman
Hopkins, Cyril G., Prof. of Agronomy, Chemist and Vice Director
of Experiment Sta., U of Illinois, 1001 S. Wright St., Champaign
Jenkins, John C. .....Attorney, 815 Spalding Bldg., Portland, Ore.
Kenyon, Arthur H. .....Lawyer, 1315 Mallon Ave., Spokane, Wash.
Pyne, Estel W. ....Capitalist, 633 S. Union Ave., Los Angeles, Cal.
Roe, Guy W. .....State Mgr. Union Fibre Co., Yorktown, Ind.
Stoner, Minna A., Prof. of Home Economics.....
.....N. D. Agricultural College, Fargo, N. D.
Wardall, Norman M., Deputy County Auditor .....
.....2215 41st Ave., S. W., Seattle, Wash.

Class of 1891.

MASTER OF SCIENCE.

Aldrich John M., With U. S. Bureau of Entomology, Lafayette, Ind.

BACHELOR OF SCIENCE.

Aldrich, Irwin D., Editor and Sec. State Board of Regents, Big Stone
Bell, William D. .....Editor, St. James, Minn.
Bentley, Wm. S. .....Physician, Hot Springs
Chamberlain, Jennie (Spooner) .....
.....Physician, 813 4th Ave., Detroit, Mich.
Crane, Austin B., Prof. of Math. and Civil Eng., Spokane Univ.
.....04303 Lincoln, St., Spokane
Davis Homer .....Physician, Genoa, Neb.
Dillon, Willis C. .....
Doughty, Hettie (Dibble) .....Beresford
Frick, Mary (Magaw) .....903 W. Zumbro St., Rochester, Minn.
Hann, Jay B. .....Photographer, Bellingham, Wash.
Houston, Grant .....Physician, Joliet, Ill.
Irish, Henry C., Horticulturist, 4206 Castleman Ave., St. Louis, Mo.
Lewis, Perry .....Inventor, 101 E. Cherry St., Mankato, Minn.
Robinson, Alice (Haberlein), 1710 Arlington Ave., Los Angeles, Cal.
Shannon, Fanny (Fourt) .....Fairfield, Iowa
Solberg, Halvor C. ....Prof. Steam and Mechanical Eng., S. D. S. C.
Updyke, Nora (Bacon) .....2211 Elizabeth St., Pueblo, Colo.
Valleau, Vinal B. .....Moving Picture Theaters, Albert Lea, Minn.

West, Hugh H. .....Physician, Spurling Bldg., Elgin, Ill.
Wolgemuth, Lee E. .....Real Estate, Hamilton, Mont.

Class of 1892.

BACHELOR OF SCIENCE.

Austin, Steven E., Mechanical Engineer .....
.....Cor. Harrison St. and 42 Court, Chicago
Davis, Samuel H. .....Farmer, Beaverton, Ore.
Griffiths, David, Asst. Agrostologist .....
.....Dept. of Agriculture, Tacoma Park, Washington, D. C.
Hamlin, John R., Jr. .....Merchant, Hawthorne, Cal.
Harding, Albert S., Prof. of History & Political Science, S. D. S. C.
Hatfield, Ira A. .....Died Feb. 8th, 1914, at Lincoln, Neb.
Keeney, Emma A. .....Physician, Silver Lake, Ore.
McAndrew, James E. ....Lawyer, 808 Realty Blk., Spokane, Wash.
McLouth, Ida B. .....Died Aug. 27, 1899, at Short Beach, Conn.
Madden, Marguerite (Akin) .....Brookings
Mathews, Hubert B. .....Prof. of Physics, S. D. S. C.
Plocker, Eva (Mathews) .....Brookings
Schlosser, Thomas F. .....Clergyman, Carlton, Ore.
Sloan, Nettie (Torrence) .....Redlands, Cal.
Snell, Effie (Clark) .....Teacher, Yutan, Neb.
Whitten, John C. .....Prof. of Hort., U. of Missouri, Columbia
Winegar, Albert J. .....Life Insurance, 854 Bluff St., Beloit, Wis.

Class of 1893.

MASTER OF SCIENCE.

Griffiths, David, Asst. Agrostologist .....
.....Dept. of Agriculture, Tacoma Park, Washington, D. C.

BACHELOR OF SCIENCE.

Bates, Edmund T. .....Farmer, Wyoming, Iowa
Beck, Milton .....Engineer, Lansing, Mich.
Edgerton, Wm. M. .....Physician, Faulkton
McLouth, Benjamin F., Ins. Agent .....
.....L. A. Investment Bldg., Los Angeles, Cal.
Robertson, Ada N. .....Teacher, R. F. D. No. 225, Anaheim, Cal.
Robertson, Clarence H., Science Teacher and Y. M. C. A. Sec.
.....for China, 120 Szechuen Road, Shanghai, China
Schoppe, W. J. A. .....Farmer, Groton

Class of 1894.

MASTER OF SCIENCE.

Plocker, Eva (Mathews) .....Brookings
Wolgemuth, Lee E. .....Real Estate, Hamilton, Mont.

BACHELOR OF SCIENCE.

Brown, Cyrus O. .....Attorney, Douglas, Wyo.
Brown, James A. .....Attorney, 522 Burr Block, Lincoln, Neb.
Dibble, Hattie (Stow) .....Castlewood
Hopkins, Mrs. C. G. .....1001 S. Wright St., Champaign, Ill.
Luke, Fred K. .....Farmer, R. F. D. No. 2, Kalispell, Mont.
Parker, Fannie (Spooner) .....Brookings
Sproul, Alex H., Director Com. Dept., State Normal, Salem, Mass.
Tanzy, Marvin F. .....Died Feb. 8, 1900, at Canton, S. D.
Waters, Geo. D. .....Real Estate, Greenfield, Ind.
Williams, Elinor (Knox) .....Saccaton, Arizona
Young, Gilbert A., Prof. of Mech. Eng., Purdue Univ. .....
.....739 Owen St., Lafayette, Ind.

Class of 1895.

MASTER OF SCIENCE.

McKenney, Duston W., Supervisor Manual Training .....
.....302 Lewis Ave., Billings, Mont.
Schoppe, W. J. A. .....Farmer, Groton
Sproul, Alex H., Director Com. Dept., State Normal, Salem, Mass.

BACHELOR OF SCIENCE.

Allison, Wm. F., Prof. of Civil Eng., U. of Wash., Seattle, Wash.
Brown, Sarah .....Teacher, Shannon City, Iowa
Cornell, Harry M. .....Real Estate 1 Stratford, Fargo, N. D.
Mayland, Mable (Merrick) .....Troy, Kan.
Parker, Anna (Moore) .....Brookings
Salisbury, Edith (Robertson) .....120 Szechuen Road, China
Sevy, Isaac B. .....Teacher, Freewater, Oregon
Sproul, Wm. T., Gen. Mgr., Ingersoll Milling Machine Co. ....
..... Rockford, Illinois
Thornber, John J. .....Prof. of Botany, U of Arizona, Tucson
Wilcox, Ernest N. .....Farmer, Thawville, Ill.

PHARMACY GRADUATES.

Briggs, Elmer E. .....Farmer, Muscoda, Wis.
Knox, Wm. H. .....With U. S. Dept. of Agr., Saccaton, Arizona
Lentz, Elmer A. .....Dentist, Brookings
Murphy Wm. .....Died July 5, 1896, at Brookings
Whitehead, B. T. .....Prof. Pharmacy, S. D. S. C.

Class of 1896.

MASTER OF SCIENCE.

Brown, James A. .....Attorney, 522 Burr Block, Lincoln, Neb.
Luke, Fred K. .....Farmer, R. F. D. No. 2, Kalispell, Mont.
Robertson, Ada N. .....Teacher, R. F. D. No. 225, Anaheim, Cal.

Snell, Effie (Clark) .....Teacher, Yutan, Neb.
Wilcox, Ernest N. .....Farmer, Thawville, Ill.

BACHELOR OF SCIENCE.

Atkinson, Jesse C. .....Farmer, Allegan, Mich.
Carter, Louis W. .....Register of Deeds, Highmore
Dibble, Ida (Brown) .....522 Burr Block, Lincoln, Neb.
Downing, Jennie C. .....Tel. Mgr., Rathdrum, Idaho
Grattan, Paul H. .....Hardware Merchant, Jackson, Minn.
Hegeman, Harry A., Captain, 19th Infantry, U. S. A. .....
.....Vancouver Barracks, Ore.
Holm, Andrew B. .....Accountant, Pierre
Hoy, Howard H. ..Asso. Prof. of Phys. and Mech. Eng., S. D. S. C.
Korstad, Mary .....Brookings
Lusk, Willard C. .....Editor Yankton Press and Dakotan, Yankton
Mathews, Alta (Smith) .....Rio Dell, Cal.
Mathews, Nora (Hoy) .....Brookings
Sasse, Ernest G. .....Physician, Lidgerwood, N. D.
Williamson, Albert .....Attorney, Kennebec

PHARMACY GRADUATES.

Cotter, J. C. .....Merchant, Dell Rapids
Grove, Eugene .....Physician, Hetland, S. D.
Moore, Thomas .....Druggist, Waterloo, Ia.
Palmer, Horton ....Druggist, 426 S. Sycamore St., Santa Ana, Cal.
Sherwin, Frank .....Merchant, Willamina, Ore.

Class of 1897.

MASTER OF SCIENCE.

Davis Homer .....Physician, Genoa, Neb.

BACHELOR OF SCIENCE.

Ainsworth, Cephas B. .....Land, 406 Idaho St., Lewiston, Mont.
Atkinson, George....Map Publisher, Ceylon, Saskatchewan, Canada
Atkinson, Walter., Civil Engineering, 632 W. 67th St., Chicago, Ill.
Boyden, Frank E. .....Physician and Surgeon, Pendleton, Ore.
Clevenger, John W. .....Dentist, Chamberlain
Hargis, Christie (Saylor) .....1019 6th Ave., E. Des Moines, Iowa
Hazle, Wm. A. .....Lawyer, 208 6th Ave., S. E., Aberdeen
Husted, Harley H. .....Died Jan. 14th, 1907, at Lincoln, Neb.
Jolley, Wm. G. .....Teacher, 5032 6th St., S. E., Portland, Ore.
Madden, Cassie (Crowley) .....625 9th St., S., Minneapolis, Minn.
Olson, Eva .....Teacher, South St. Paul, Minn.
Parsons, Thos. S. .....Prof. of Agro., U. of Wyo., Laramie, Wyo.
Roe, Robert .....Stockman, Highmore
Shuster, John W...Asso. Prof. Elec. Eng., U. of Wisconsin, Madison

Thornber, Walter S., Pres. Lewiston-Clarkson School of Hort. ..... Lewiston, Idaho
Walters, Wm. H. .....Grain Buyer, Bruce
West, Orpha (Sevy) .....Freewater, Ore.
Whaley, Neva (Harding) .....Brookings
Whitehead, Bower T. .....Prof. of Pharmacy, S. D. S. C.
Wilcox, Alice (Remsburg) .....Thawville, Ill.
Work, Lloyd E. ....Bond Salesman, 10 S. La Salle St., Chicago, Ill.
Young, Grace (Bullen) .....260 Jessup St., Portland, Ore.

Class of 1898.

MASTER OF SCIENCE.

Chilcott, E. C., Agronomist in charge of Dry Land Agriculture, ...Washington, D. C.
Harkins, Lilla A., Prof. Domestic Science ....Montana Agri. College, Bozeman, Mont.
Parsons, Thos. S. .....Prof. of Agro., U. of Wyo., Laramie, Wyo.

BACHELOR OF SCIENCE.

Ainsworth, Howard, Fruit Grower ....R. F. D., No. 17, Mountain View, Cal.
Ainsworth, Flora (Hazle) .....208 6th Ave., S. E., Aberdeen
Barton, Alice (White) .....2548 C. St., Santa Ana, Cal.
Beck, Louis .....Engineer "Ana Dean Farm," Barberton, O.
Bolles, Myrick N. .....Mill Manager, 413 Wall St., Joplin, Mo.
Curtiss, Elsie (Crane) .....Kettle Falls, Wash.
Davidson, Margaret (Crane) ..1818 E. Liberty St., Spokane, Wash.
Fjerestad, Hans C. .....Loans, Sioux Falls
Harding, Charles J. .....Teacher, Mankato, Minn.
Hegeman, Maude (Boyden) .....Pendleton, Ore.
Hegeman, Mabel (Allison) .....Univ. of Wash., Seattle, Wash.
Hodgeson, Herbert H., Top. Eng., U. S. Geol. Survey, Wash., D. C.
Knox, Wm. H. .....With U. S. Dept. of Agr., Saccaton, Arizona
Lawrence, Claude W. .....Farmer, Sequim, Wash.
Lawrence, Clay .....Lawyer, Pioneer Bldg., Seattle, Wash.
Loveland, Addie (Towne) ..2104 Penn. Ave. S., Minneapolis, Minn.
Paddock, Jay M. .....Traveling Salesman, Eugene, Ore.
Riemann, Edith (Adams) ..34 Rue de Comines, Bruxelles, Belgium
Thornber, Wm. T. .....Farmer, Colman
Towne, Judson, Teacher Physics, E. Side H. S..... .....2104 Penn. Ave. S., Minneapolis, Minn.

PHARMACY GRADUATES.

Beebe, Jay L. .....Physician and Surgeon, Anaheim, Cal.
Clevenger, J. W. .....Dentist, Chamberlain
Holsey, Joseph .....Druggist, Veblen
Lee, Berton E. .....Accountant, 104 S. 4th St., Mankato, Minn.

Class of 1899.

MASTER OF SCIENCE.

Dibble, Hattie (Stow) .....Castlewood
Mathews, Hubert B. .....Prof. of Physics, S. D. S. C.
Thornber, Walter S., Pres. Lewiston-Clarkson School of Hort.
..... Lewiston, Idaho
Whitten, John C. .....Prof. of Hort., U. of Missouri, Columbia

BACHELOR OF SCIENCE.

Colegrove, Ina (Nelson) .....148 West St., Worcester, Mass.
Findeis, Phillip .....Lumber Merchant, Miranda
Lawrence, Mary M., Inst. in Domestic Science, State Normal
..... Bellingham, Wash.
Lawrence, Wm. H. .....Horticulturist, U of Arizona, Tucson
Mason, Nellie (Mason) .....Albia, Ia.
Nachtigal, Isaac .....Farmer, South Shore
Sherwin, Howard H., Civil Engineer, 70 N. Y. Ave, Brooklyn, N. Y.
Walter, Edith (Fystrom) ....Died May 16, 1910, at Geneseo, N. D.
West, George .....Physician, Armstrong, Iowa

PHARMACY GRADUATES.

Carr, George .....Druggist, Bison
Crowley, D. C. .....Druggist, Portland, Ore.
Hepner, Frank .....Asst. Chemist U. of Wyoming, Laramie
Kendall, Clinton D. .....Druggist, Brookings
Lindsey, Charles .....Farmer, Winfred
Oulton, Frank .....Real Estate, Faulkton
Shriver, E. M. .....Real Estate, Coos Bay, North Bend, Ore.
Taylor, C. DeWitt .....

Class of 1900.

BACHELOR OF SCIENCE.

Allen, Hart M. .....Druggist, Woodland, Cal.
Anderson, Clark W. .....Died March 6th, 1902, at Brookings
Beebe, Jay L. .....Physician and Surgeon, Anaheim, Cal.
Carlson, Esther (Lilygreen) ....701 Magnolia St., St. Paul, Minn.
Carlson, Ella (Howard) .....Lake Preston
Davies, Sara (Sherwin) .....70 N. Y. Ave., Brooklyn, N. Y.
Davies, Mary (Hutchins) .....Falls City, Neb.
DeLa, John W. .....Editor, Balfour, N. D.
Doughty, Matthew H. .....Civil Engineer, Denver, Colo.
Grove, Frank W. .....Dentist, Delta, Colo.
Harza, Carl .....Electrician, 21 Scovel Place, Detroit, Mich.
Kendall, Clinton D. .....Druggist, Brookings
Lawrence, Jessie (Hagerman) .....Auburn, Wash.
Mathews, Alice (Albright) ....714 20th St. N., Great Falls, Mont.

Mathews, Roscoe A., Lumberman, 1323 6th Ave. N. .....
.....Great Falls, Mont.
Morrison, Freda (Cole) .....Wenatchee, Wash.
Olson, Gustava (Hodgeson) .....Linden, Md.
Williams, Callie (Olson) .....116 N. Summit Ave., Sioux Falls

PHARMACY GRADUATES.

Bentley, Wm. S. .....Physician and Surgeon, Hot Springs
Brosseau, Jessie E. .....Physician and Surgeon, Frankfort
Baldwin, Corwin B. .....Druggist, Rapid City
Connell, John C. .....Druggist, Luverne, Minn.
Else, Earl, Physician and Surgeon, Broadway Bldg., Portland, Ore.
Eckhart, Henry .....Died at Menno, S. D.
George, William .....Physician and Surgeon, Selby
Hart, Bertrand .....Physician and Surgeon, Blunt
Jones, Robert .....Druggist, Madison
West, Hugh H. ..Physician and Surgeon, Spurling Bldg., Elgin, Ill.

Class of 1901.

MASTER OF SCIENCE.

Knox, Wm. H. .....With U. S. Dept. of Agr., Saccaton, Arizona
Whitehead, Bower T. .....Prof. of Pharmacy, S. D. S. C.

BACHELOR OF SCIENCE.

Bagley, Sussana..Teacher, 3012 Ezekiel St., Lake Co., Zion City, Ill.
Bolles, Laura Jane .....Teacher, Muskogee, Okla.
Brosseau, Jesse E. .....Physician, Frankfort
Boyd, Mary (Labbitt) .....410 13th St., Sioux City, Ia.
Cranston, Margaret (Young) ..Died June 7th, 1907, at Oakes, N. D.
Culhane, Michael E. .....Culhane Adjustment Co., Brookings
Davies, Autumn, Instructor in History, H. S. .....
.....Mason Apartments, Omaha, Neb.
Dodge, Fred E. .....Hotel Mgr., Redfield
Else, Earl, Physician and Surgeon, Broadway Bldg., Portland, Ore.
Enos, Winifred .....Librarian, Brookings
Erickson, Martin L. .....Forestry Service, Medford, Ore.
Evans, Lina (Roskie) .....Custer
Fishback, Myra (Kennedy) .....86 College St., Calcutta, India
Harza, LeRoy F. .....Civil Eng., Portland, Ore.
Hatton, John H. .....Forestry Service, Denver, Colo.
Johnson, Rhoda (Lee) .....Died Oct. 18, 1909, Denver, Colo.
Kendall, Leonard J. .....Telegraph Operator, Brookings
Kennedy, C. Leroy .....
.....Fruit Raiser, R. F. D. No. 18, Mountain View, Cal.
Langdon, Lillian (Culhane) .....Brookings

McElmurry, Loretta, Instructor Domestic Science, State Normal ..... Madison
Mork, Theodore .....Farmer, Des Lacs, N. D.
Phillips, Florence (Haas) .....Arlington
Phillips, C. Louise ....Librarian, U. S. Dept. Ag., Washington, D. C.

PHARMACY GRADUATES.

Cornell, Edward, Pharmacist .....
.....1824 Lyndale Ave., S., Minneapolis, Minn.
Tidball, Clyde .....Druggist, Brookings

Class of 1902.

BACHELOR OF SCIENCE.

Fleming, Michael, ...
....With M. A. Hanna Coal Co., Pioneer Bldg., St. Paul, Minn.
George, William A. .....Physician and Surgeon, Selby
Hart, Bertrand M. .....Physician and Surgeon, Blunt
Hepner, Frank E., Asst. Station Chemist, U. of Wyoming, Laramie
Johnson, Clara (Johnson) .....Brookings
Johnson, Edward .....Died May 1, 1907, Tacoma, Wash.
Kephart, George .....Lawyer, Iowa Building, Sioux City, Ia.
Lee, Berton E. .....Accountant, 104 S. 4th St., Mankato, Minn.
Ramsey, Henry J., Expert in Fruit Storage, Bureau Plant Industry, 309 Argyle Apartments.....Washington, D. C.
Roskie, Geo. .....Forester, Custer
Thornber, Edith (Cuckow) .....La Junta, Colo.
Trooien, Ole N. .....Contractor, Brookings
Winegar, Laura .....Nurse, Brookings

PHARMACY GRADUATES.

Allison, Wm. F., Prof. of Civil Eng., U. of Washington.....
..... Seattle, Wash.
Boyden, Frank E. .....Physician and Surgeon, Pendleton, Ore.
Christianson, Bernett .....Druggist, Wessington Springs
Hayter, McPherson .....Druggist, Artesian
Jarrett, Arthur A. .....Druggist, Colman
Jarvis, S. Hall .....Druggist, Faulkton
Leighty, James A. .....Druggist, Winfred
Morton, Frederic M. .....Druggist, Lake City
Pickles, Chester E. .....Farmer, Elrod
Schnaidt, Henry .....Druggist, Parkston
Schroeder, Anna (Gassman) .....Howard
Thomas, John C. .....Druggist, Marion

Class of 1903.

MASTER OF SCIENCE.

Crane, Austin B., Prof. of Math. and Civ. Eng., Spokane Univ. ..... Spokane, Wash.
Hoy, Howard H.....Asso. Prof. of Phys. and Mech. Eng., S. D. S. C.

BACHELOR OF SCIENCE.

Almond, Fred C. .....Died March 12th, 1909, at Clear Lake
Cole, John S., Examiner of Dry Land Agr. Exp. Stations, Dept. of Agr. .....989 So. Penn. Ave., Denver, Colo.
Colegrove, Lettie (Drew) .....Farmington, Minn.
Cuckow, Fred W. .....Lawyer, La Junta, Colo.
Hubbart, Minnie (Holbein) .....Lansford, N. D.
Johnson, Isaac .....Lumberman, Brookings
Kendall, Krete (Miller) .....Brookings
Langdon, Alice .....Stenographer, Brookings
Miller, Shirley P. .....Professor Zoology, S. D. S. C.
Norton, Frank A. .....Fruit Grower, Grand View, Wash.
Otterness, Jens M., Private Secretary to Senator Sterling ....441 Senate Office Bldg., Washington, D. C.
Peirce, E. Esther .....Teacher, 524 E. Kemp St., Watertown
Sanborn, Ethel I., Instructor Univ. of Oregon ....670 12th Ave., E., Eugene, Ore.
Sarvis, Roscoe J., Elec. Eng., 1319 7th St., S. E., Minneapolis, Minn.
Seide, Louise (Prell) .....Calamus, Iowa
Webster, James L. .....Farmer, Wenatchee, Wash.
Westcott, Geo. R., Asst. Engr., Mo. Pac. Ry. ....5764 Goodfellow Ave., St. Louis, Mo.

PHARMACY GRADUATES.

Drew, Arthur W. .....Physician and Surgeon, Farmington, Minn.
Hall, Roy J. .....Druggist, Oldham
Heston, Edward C. .....Physician and Surgeon, Roslyn, Wash.
Hollister, Arthur R. .....Traveling Salesman, Madison
Howell, John E., Chemist, S. P. R R. ....402 Hathaway Ave., Houston, Texas
Johnston, Samuel .....Druggist, Hazel
Norton, Frank A. .....Fruit Grower, Grand View, Wash.
Steiner, Frederick W., Physician ....323 Union Ave., Havre de Grace, Md.
Trumm, Robert E. .....Druggist, Hayti
Van Dusen, Fred J. .....Lead
Williams, Percy, Physician and Surgeon ....557 Spring St., Los Angeles, Cal.
Young, Alfred J. .....Farmer, Adanac, Saskatchewan

Class of 1904.

MASTER OF SCIENCE.

Trooien, Ole N. .....Contractor, Brookings

BACHELOR OF SCIENCE.

Binford, Wm. W. .....Lumberman, Greenleaf, Idaho
Bushnell, Maude (Kelton) .....Henry
Loucks, Anna Y. (Brown) .....Brookings
Mattice, Albert F. .....Oculist, 1017 Cobb Bldg., Seattle, Wash.
McGarry, Lawrence R. .....Merchant, Mansfield
Ruth, Thomas H. .....Veterinary Surgeon, De Smet
Sanderson, Everett G. .....Farmer, Aurora
Sherwin, Ralph L. .....Civil Engineer, Bay Harbor, Fla.
Smith, Wm. H. .....Missionary, Dámaguete, P. I.
Thompson, Clarence .....Farmer, Dell Rapids
Walter, L. Erving .....Conde

PHARMACY GRADUATES.

Anderson, Ernest .....Druggist, South Shore
Dillon, Cornelius .....Druggist, Hotel Smede Bldg., Eugene, Ore.
Frick, Harry E. .....Merchant, Mitchell
Goodale, Alton R. ....Druggist, Angeles Pharm., Los Angeles, Cal.
Hooker, Henry .....Physician, Danville, Ill.
Koch, Arthur E. .....Attorney, 621 Ford Bldg., Detroit, Mich.
Ramsdell, Leonard C., Druggist .....
.....With Murgittroyd's Drug Co., Spokane, Wash.
Thompson, Gottfried .....Physician and Surgeon, Sioux Falls
Weisflock, Theodore .....Druggist, Frankfort

Class of 1905.

MASTER OF SCIENCE.

Hepner, Frank E., Asst. Station Chemist, U. of Wyoming, Laramie
Norton, Frank A. .....Fruit Grower, Grand View, Wash.
Phillips, C. Louise, Librarian, Bureau of Plant Industry, Grain Standardization .....Washington, D. C.
Thompson, Clarence .....Farmer, Dell Rapids
Walter, L. Erving .....Conde

BACHELOR OF SCIENCE.

Boyden, Guy L. .....Physician and Surgeon, Pendleton, Ore.
Chappell, Bessie .....Teacher, Lamar, Colo.
Chappell, Elsie (Wilson) .....Brookings
Davis, Clifford W. .....Farmer, 2337 Grant St., Berkeley, Cal.
Elliott, Roy K. ....Electrician, 20 Bay State Ave., Somerville, Mass.
Fassett, Della (Loucks) .....Watertown
Fishback, Van Dusen .....Asst. Cashier, Brookings

Forrest, Victor E., Contractor, 224 Boston Blk., Minneapolis, Minn.
Fulkerson, Vincent .....Special Agent, Dept. of Agr., Fallon, Nev.
Grove, Mary (Potter) .....333 W. Grand Ave., Springfield, O.
Hage, Christian F. .....Druggist, Toronto
Howg, Edwin M. .....Physician and Surgeon, New Effington
Jensen, Lewis N., Special Agent U. S. Dept. Agr., Amarillo, Texas
Johnson, Carl L...Electrician, 805 Lincoln Ave., Schenectady, N. Y.
Mathews, Harry E. .....Supt. Forest Reserve, Las Vegas, Nevada
Miller, Ralph L. .....Lumberman, Melville, N. D.
Murphy, Matt W. .....Lawyer, 408 8th Ave. S., Fargo, N. D.
Nelson, John Harland, Prof. Structural Eng., Polytechnic Institute, 148 West St. .....Worcester, Mass.
Ronning, Oscar E. .....Rural Mail Carrier, Hayti
Schaphorst, Wm. F., Technical Advertising, Woolworth Bldg. .....New York City
Seeger, Adolph M. ....Elec. Engineer, Y. M. C. A. Bldg., Toledo, O.
Slocum, Ina S. (Deeley) ...2818 Granville St. S., Vancouver, B. C.
Thogerson, Arthur A. .....Contractor, 437 C. of C., Portland, Ore.
Walters, Daisy .....Teacher, Bruce
Williams, Harry, Real Estate .....L. A. Investment Bldg., Los Angeles, Cal.
Williams, Percy, Physician and Surgeon .....557 S. Spring St., Los Angeles, Cal.

PHARMACY GRADUATES.

Fjerestad, Carl .....Druggist, Elkton
Howg, Edwin M. .....Physician and Surgeon, New Effington
Larson, Lars P. .....Teacher, Howard
Mathews, Harry E. .....Supt. Forest Reserve, Las Vegas, Nev.
McCurdy, Walter .....Druggist, Lane
Morton, Grant J., Federal Drug Ins., Custom House, Portland, Ore.
Pottinger, Geo. .....Druggist, Valley Springs
Thompson, Clarence .....Farmer, Dell Rapids
Volin, Porter .....Physician, Lennox

Class of 1906.

BACHELOR OF SCIENCE.

Aldrich, G. Malcolm, Prin. Calhoun Schools .....R. F. D. No. 2, Hopkins, Minn.
Barrett, J. Wylie .....Electrical Engineer, Plankinton
Bonesteel, Bee (Dillman) .....Newell
Brownell, Ellen (Wellington) .....6326 Ripton, Los Angeles, Cal.
Burghardt, Roy D. .....Electrician, 89 Marion St., Seattle, Wash.
Carpenter, Abbie J., Domestic Science Teacher .....524½ Broadway, Seattle, Wash.

Chilcott, Ellery F. .....Supt. Ex. Station, Woodward, Okla.
Coller, Fred A., Physician and Surgeon .....
.....658 W. Jefferson St., Los Angeles, Cal.
Davies, Gladys (Grace) .....Akron, Colo.
Erstad, Alfred J., Electrician, Care Standard Machinery Co....
..... Portland, Ore.
Evans, Edna V., Domestic Science Teacher .....
.....College of Montana, Deer Lodge, Montana
Grace, Oliver .....Supt. Sub Station, Akron, Colo.
Kennard, Frank L., Agronomy .....
.....State School of Agr., Crookston, Minn.
Knox, Arthur H. .....Farmer, Alpena
Koch, Arthur E. .....Lawyer, 621 Ford Bldg., Detroit, Mich.
Moffatt, Margaret E. .....Teacher, Brookings
Reich, Rose M. .....Teacher, Adams, Wis.
Thornber, Jessie B. .....La Junta, Colo.
Youngberg, Guy E. .....Asst. in Chem., S. D. S. C.
Allison, Harold .....Physician and Surgeon, Heppner, Ore.
Bergeim, Olaf, Asst. in Chem., Jefferson Med. Col., Philadelphia, Pa.
Davis, Gladys (Grace) .....Akron, Colo.
Harben, Bartlett L. .....Died June 10, 1912, at Winner, S. D.
Holm, A. B. .....Accountant, Pierre
Locke, Chas. .....Pharmacist, Brookings
Wipf, Michael J. .....Druggist, Alsen, N. D.

Class of 1907.

MASTER OF SCIENCE.

Culhane, Michael E. .....Of Culhane Adjustment Co., Brookings

BACHELOR OF SCIENCE.

Binnewies, Mabel E. .....Teacher, Brookings
Briggs, Stephen F., of Briggs & Stratton Co. .....
.....258 Milwaukee St., Milwaukee, Wis.
Burch, Walter S. .....Elec. Engr., Box 653, Rochester, N. Y.
Christianson, Christine, Teacher .....
.....305 S. 6th St., North Yakima, Wash.
Dillman, Arthur C. .....Special Agent, Dept. of Agr., Newell
Dutcher, R. Adams, Prof. of Agr. Chem., Ore. Agr. College....
.....706 N. 12th St., Corvallis, Ore.
Elliott, Bruce A. .....Manual Training Teacher, Hibbing, Minn.
Elliott, Ross W. .....Manual Training Teacher, Hibbing Minn.
Fjerestad, Alman .....Electrical Engineer, Estelline
Gagel, Gerald .....Electrician, Rialto, Cal.
Hofstetter, Geo., Instructor Manual Training, Govt. School....
.....Box 487, Manila, P. I.

Kirk, John R. .....Farmer, Springfield
Johnson, Aaron G., Plant Pathologist, U. of Wis. .....
.....132 Lothrop St., Madison, Wis.
Knutson, Mabel (Trooien) .....Teacher, S. D. S. C.
McCordic, Clare, Machine Expert, Moose Jaw, Saskatchewan, Canada
McElmurry, Rilla (Eels) .....Youngstown, Ohio
Morton, Grant J., Fed. Drug. Ins., Customs House, Portland, Ore.
Reich, J. Carl..Western Elec. Co., 1700 Jackson Blvd., Chicago, Ill.
Salmon, Cecil, Agronomist Kansas Agr. College .....
.....1630 Leavenworth, Manhattan
Sanderson, Eugene, Electrician .....
.....56 Woodward Ave., S. Norwalk, Conn.
Tuttle, Volney J., General Electric Co., D. C., Eng. Dept.....
.....Schenectady, N. Y.
Underwood, Genevieve .....Teacher, Watertown
Westcott, Ruth M. (Johnson) .....132 Lothrop, Madison, Wis.
Work, Mary I. .....Stenographer, 3850 Indiana Ave., Chicago

PHARMACY GRADUATES.

Dexter, David F. .....Druggist, Canton
Roney, Ray W. .....Druggist, Chester
Ennis, Herbert I. .....Druggist, Volga
Kartrude, Inga M. .....Teacher, Hardwick, Minn.

Class of 1908.

MASTER OF SCIENCE.

Coller, Fred A., Physician and Surgeon .....
.....658 W. Jefferson St., Los Angeles, Cal.
Koch, Arthur E. .....Lawyer, 621 Ford Bldg., Detroit, Mich.

ELECTRICAL ENGINEER.

Elliott, Ross W. .....Manual Training, Hibbing, Minn.

BACHELOR OF SCIENCE.

Alton, Benjamin H., Physician and Surgeon .....
.....St. Johns, Newfoundland
Bergeim, Olaf, Asst. in Chemistry, Jefferson Med. Col. .....
..... Philadelphia, Penn.
Carpenter, Clarence A. .....Electrical Engineer, Rapid City
Chilcott, Ralph .....Farmer, Vienna, Va.
Cooley, William R. .....Stockman, Springfield
Griffith, T. Edwin .....Farmer, Timmer, N. D.
Holsey, Ernest .....Elec. Eng., Y. M. C. A. Bldg., Spokane, Wash.
Hubbart, Edith J. .....Asst. Librarian, S .D. S. C.
Hyde, Hallie W. .....Inst. Dom. Sc., U. of Idaho, Moscow
Kelly, Amy .....Inst. Dom. Sc., U. of Idaho, Boise

Kendall, Nellie G. .....Instructor in English, S. D. S. C.
Locke, Francis J., Elec. Eng., 513 Summer St., West Lynn, Mass.
Mathews, Oscar R. .....Expert, Dry Land Agr., Newell
Mayland, Amy .....Died Feb. 17, 1909, at Lincoln, Neb.
Mayland, George R. .....P. G. Student, S. D. S. C.
Nelson, Aaron L. .....Electrician, 511 E. Ave., Erie, Pa.
Nilsson, Edward, Artist, Capital Engraving Co. .....
.....219 W. Edwards St., Springfield, Ill.
Olberg, Fred C. .....Druggist, Ballard, Wash.
Perry, William J. .....Elec. Eng., Corozol, Canal Zone
Soreng, Edward M., Electrician, with Briggs-Stratton Co. ....
.....198 15th St., Milwaukee, Wis.
Sperb, John J. .....Civil Eng., 301 Wheeler St., Portland, Ore.
Ulrich, Darwin William, Electrical Engineer .....
.....2605 Cal. Ave., Seattle, Wash.
Underwood, Beatrice .....Watertown
Underwood, Loto (White), Brooklyn Botanical Gardens .....
.....Brooklyn, N. Y.
Weeks, Gordon A., Electrical Engineer .....
.....711 Post St., Hotel Robbins, San Francisco, Cal.
West, Florence E. .....Hill Top Farm, Rhinebeck, N. Y.
Whitehead, Lindsey W.....Civil Eng., Boston, Mass.
Williams, Ruby .....Teacher, 557 S. Spring St., Los Angeles, Cal.

PHARMACY GRADUATES.

Murphy, James P. .....Druggist, Rapid City
Hoch, Joseph L. .....Druggist, Scotland
Olberg, Fred C. .....Druggist, Ballard, Wash.
Quiggle, Ernest J. .....Pharmacist, Groton

Class of 1909.

MASTER OF SCIENCE.

Mathews, Oscar R. .....Expert, Dry Land Agr., Newell

ELECTRICAL ENGINEER.

Elliott, Bruce .....Manual Training Teacher, Hibbing, Minn.

MECHANICAL ENGINEER.

Schaphorst, Wm., Technical Advertising .....
.....Woolworth Building, New York City

BACHELOR OF SCIENCE.

Bacon, Eva (Paulson) .....Castlewood
Bushnell, Edna .....Teacher, Touchet, Wash.
Camp, Fred .....Farmer, Winfred, Mont.
Catlett, Winifred .....Brookings
Champlin, Manley .....Asst. in Agronomy, S. D. S. C.

Clarke, Roy .....Student, U. of C., Chicago, Ill.
Coughlin, Chas., Supt. Construction, Briggs-Stratton Co. ....
.....258 Milwaukee St., Milwaukee, Wis.
Denhart, Cecil .....Grain Dealer, White
Erwin, Ada .....Inst. Dom. Sc., State Normal, Stevens Point, Wis.
Evans, Iva (Morrison) .....Redfield
Furnstahl, John .....Civil Engineer, Ajo, Ariz.
Jensen, Harvey .....Insurance, Fargo, N. D.
Jones, Robert .....Lawyer, Milbank
Kremer, Alvin .....Bookkeeper, U. S. Nat'l Bank, Portland, Ore.
Lane, Lloyd .....Farmer, Beresford
McKeown, Ralph .....Farmer, Sentinel Butte, N. D.
Marquis, Sidney, Electrical Engineer .....
.....590 68th Ave., West Allis, Milwaukee, Wis.
Matheny, Chester, Elec. Eng., Gen. Elec. Co. .....
.....Monadnock Bldg., Chicago, Ill.
Odland, John .....Farmer, Sentinel Butte, N. D.
Palm, Ellen (Olson) .....Norden
Peirce, Ruth .....Music Teacher, Brookings
Phillips, Geo. .....Y. M. C. A. Sec., S. D. S. C., Brookings
Sarvis, Johnson.....Special Agent, Dept. of Agr., Mandan, N. D.
Sperb, Frank .....Civil Engr., 301 Wheeler St., Portland, Ore.
Swering, Joe .....Electrical Engineer, Brookings
Treacy, Timothy, Theological Student .....
.....487 Mich. Ave. N. E., Washington, D. C.
Vernlund, Carl, Physician and Surgeon .....
.....Hartford Hospital, Hartford, Conn.
White, Orland, Botanist, Brooklyn Bot. Gardens, Brooklyn, N. Y.
Wickre, Jacob .....Farmer, Langford
Wright, Mary (Dutcher) .....706 N. 12th St., Corvallis, Ore.

PHARMACY GRADUATES.

Abbott, Guy S. .....Druggist, Yale
Buck, Ervin .....Druggist, Wessington Springs
Crosby, LeRoy .....Pharmacist, Hitchcock
Dickey, James .....Druggist, Iroquois
Hage, Christian .....Druggist, Toronto
Wilson, Frank M. .....Druggist, Harlem, Mont.
Youngberg, Guy E. .....Asst. in Chem., S. D. S. C.

Class of 1910.

MASTER OF SCIENCE.

Alton, Benjamin H., Physician and Surgeon .....
.....St. Johns, Newfoundland

Dutcher, R. Adams, Prof. of Agr. Chem., Ore. Agr. College....
.....706 N. 12th St., Corvallis, Ore.
Youngberg, Guy E. .....Asst. in Chem., S. D. S. C.

MECHANICAL ENGINEER.

Hofstetter, George, Inst. in Manual Training .....
.....Govt. School, Box 487, Manila, P. I.

BACHELOR OF SCIENCE.

Atkinson, Fay .....Farmer, White
Barber, Floyd .....Civil Engineer, Rogers Bldg., Vancouver, B. C.
Biggar, Howard H. .....U. S. Dept. of Agr., Washington, D. C.
Crothers, Harold, Inst. in Elec. Eng., U. of Wisconsin .....
.....740 Langdon St., Madison, Wis.
Crothers, Ralph .....Farmer, Badger
Fickle, Walter .....Died Jan. 26, 1911, at Blunt
Fridley, Ray .....Manager Fridley's Garage, Brookings
Grotta, Edwin .....Implement Dealer, Esmond
Johnson, Charles .....Hardware Merchant, Hetland
Johnson, Milla (Anderson) .....New England, N. D.
Kartrude, Inga .....Teacher, Hardwick, Minn.
Kelly, T. B. ....Music Student, 324 E. 17th St., Minneapolis, Minn.
Lothrop, Elmer .....Electrical Engineer, Redfield
Lloyd, Robert, Elec. Contr., 1131 Van Nuys Bldg., Los Angeles, Cal.
Matheny, Allie (Wooledge) .....Minot, N. D.
Matheny, Fred .....Civil Engineer, 1731 13th Ave., Seattle, Wash.
Morrison, Joseph .....Agr. Expert, Ex. Sub Station, Highmore
Nagel, Herman ....Student, 1444 Bever Ave., Cedar Rapids, Iowa
Ort, A. A., Civil Engineer, 601 Western Union Bldg., Chicago, Ill.
Palm, Andrew .....County Agricultural Agent, Watertown
Sexauer, Elmer .....Grain, Brookings
Sheldon, Nettie (Atkinson) .....White
Wahl, Walker W. .....Farmer, Cartersville, Mont.
Welch, Cecile .....Asst. in Music, S. D. S. C.
Wohlheter, Verne .....Attorney, White
Yocom, Frank .....Inst. in Manual Training, Holtville, Cal.

PHARMACY GRADUATES.

Brown, Geo. B. .....Pharmacist, Clark
Goldthrop, George .....Druggist, Conde
Morrison, Joseph .....Agricultural Expert, Sub Station, Highmore
Williams, Arthur .....Pharmacist, Sturgis

Class of 1911.

MASTER OF SCIENCE.

Sarvis, Johnson.....Special Agent, Dept. of Agr., Mandan, N. D.
White, Orland, Botanist, Brooklyn Bot. Gardens, Brooklyn, N. Y.

BACHELOR OF SCIENCE.

Balmat, John .....Civil Engineer, 2614 Agnes, Kansas City, Mo.
Catlett, Marguerite .....Brookings
Cooledge, Leslie ....Instructor, Mich. Agr. College, Lansing, Mich.
Cottingham, Jay .....Lumberman, Sioux City, Iowa
Erwin, Ruth (Bibby) .....State College, Pa.
Finley, Vollmar .....Inst. in Agr., Redwood Falls, Minn.
Fridley, Bess (Fromme) .....Purdue University, Lafayette, Ind.
Fridley, Richard .....Died Aug. 23, 1912, at Lake Benton, Minn.
Fromme, Fred, Inst. in Botany, Purdue University, Lafayette, Ind.
Gropengieser, Fred .....Asst. Bank Cashier, Onida
Haas, Carrie (Quinn) .....Arlington
Hallen, Harold .....Electrical Engineer, Ord, Neb.
Huntemer, Percy .....Inst. in Agr., Melrose, Minn.
Jarman, Mabelle .....Brookings
Johnson, Clifford .....Died September, 1912, at Huron
Knutson, Geneva (Flittie) .....Brookings
Ladd, Amy .....Student Physical Culture, Battle Creek, Mich.
Mathewson, Lynn, Mech. Engr., 5019 Calumet Ave., 2 Apt., Chicago
McMillan, Orville .....Farmer, Alpena
Meharg, Max .....Inst. Man. Training, Park City, Utah
Mitchell, Harry, Elec. Engr., 2933 Girard Ave. S., Minneapolis, Minn.
Odland, Ole M. .....Farmer, Hurley
Peterson, Helen .....Teacher, Stockholm
Plocker, Florence (Shelden) .....Seneca
Quinn, Roy .....Inst. in Agr., Fairfax, Minn.
Randall, Frank .....Mech. Engr., Aberdeen
Sherwin, Muriel (Stoll) .....Brookings
Starring, Cecil, Asst. in Hort., Mont. Agr. College, Bozeman, Mont.
Swenehart, John .....Inst. in Agr., Crandon, Wis.
Throop, Lotta (Odland) .....Sentinel Butte, N. D.
Tinker, Mabel .....Brookings
Wilson, R. O. .....Registrar, Mont. Agr. Col., Bozeman, Mont.

PHARMACY GRADUATES.

Fellows, Carl .....Druggist, White Lake
Martin, Earl S. .....Merchant, Oldham
Serles, Earl .....Student, S. D. S. C.
Shea, Henry .....Asst. in Chemistry, S. D. S. C.
Vis, Heyme .....Pharmacist, Stickney

Class of 1912.

BACHELOR OF SCIENCE.

Atwood, Geo. B. .....Veterinarian, Watertown
Bibby, Irwin J., Asst in Dairying, Penn. State Col., State College
Bisbey, Guy R. ..Botanist, Brooklyn Bot. Gardens, Brooklyn, N. Y.
Dachtler, Fred J. .....Farmer, Sturgis
Edson, Ray W. ..With Gen. Elec. Co., 77 Park St., West Lynn, Mass.
Erdmann, Henry E. .....P. G. Student, U. of Wis., Madison, Wis.
Granger, Paul F., Civil Engineer .....
.....1220 13th Ave. W., Calgary, Alberta, Can.
Hathaway, Floyd C., Instructor in Agr. .....
.....Man. Training School, Ellendale, N. D.
Jensen, Russell C. ....Asst. in Dairying, U. of Neb., Lincoln, Neb.
Kremer, Henrietta (Furnstahl) .....Ajo, Ariz.
Larson, John E. .....Agriculture, Ore. Agr. Col., Corvallis, Ore.
Marchant, Guy R. ....Elec. Engr., 323 W. 23rd St., New York City
Oakland, Irwin S. .....Manager Seed Co., Sioux Falls
Peck, Arthur R., Elec. Engr., 16 Campbell Ave., Schenectady, N. Y.
Pence, Clay, Elec. Salesman, 313 Penwood Ave., Wilkinsburg, Pa.
Reeve, John E., Elec. Engr., 16 Campbell Ave., Schenectady, N. Y.
Revell, Grace .....Instructor, S. D. S. C.
Sauder, William O. .....Forestry, Saguache, Colo.
Schaphorst, Ben, Law Student, 1003 E. Huron St., Ann Arbor, Mich.
Skinner, Lila, Inst. in Home Economics, U. of Ohio, Columbus, O.
Sparks, Henry .....Civil Engineer, Sturgis
Stearns, Arthur J. ..Elec. Engr., 16 Hecla Blk., Edmonton, Alberta
Welker, Verne E. .....Electrical Engineer, Bagley, Minn.

PHARMACY GRADUATES.

Bacon, Harry .....Pharmacist, Hill City
Christianson, Helen .....Druggist, Volga
Clark, Robt. W. .....Druggist, Sioux Falls
Farnham, Beatrice .....Druggist, Waubay
Farrar, Vere .....Pharmacist, Langford
Grant, Clyde .....Pharmacist, Kasson, Minn.
Holstrom, Will .....Pharmacist, Huron
Holleman, William .....Pharmacist, Springfield
Leavitt, Ethel .....Pharmacist, Milbank
Morton, Richard .....Pharmacist, New Effington
Serles, Raymond .....Pharmacist, Salem

Class of 1913.

BACHELOR OF SCIENCE.

Basgen, Fred .....Structural Engineer, Goodwin
Binnewies, Edward R. .....Asst. in Chem., S. D. S. C.

Brigham, Ruth .....Brinklow, Md.
Cole, Glenn H...Agriculture, U. S. Dept. of Agr., Washington, D. C.
Dunn, Everett W. .....Civil Engineering, Eldora, Iowa
Engstrom, Carl .....Electrical Engineering, Oldham
Faulkner, Hugh .....Farmer, Burkmere
Fowlds, Matthew .....Asst. in Agronomy, S. D. S. C.
Freiberg, George, Research Fellow, Mo. Bot. Gardens, St. Louis, Mo.
Greenly, Maurice G. .....Science Teacher, Honolulu, Hawaii
Gurslee, Chris B. .....Inst. in Agr., Detroit, Minn.
Heiser, Agnes K (Yunker) .....Hecla
Huyck, Nina B. .....Teacher Domestic Science, Wayne, Neb.
King, Stanley .....Civil Engineer, Watertown
Kremer, Ralph C. .....Inst. in Agriculture, Jordan, Minn.
Landweer, Earl .....Electrical Engineer, Hartford
McHugh, Frank James .....Farmer, West Point, Miss.
Matheny, Hazel A. .....Conde
Morrow, Strayer .....Saguache, Colo.
Morrison, Guy E. .....Agr. Expert, Redfield
Nilsson, Anna C. .....Teacher, Henning, Minn.
Nord, Roy A., Law Student, 1003 E. Huron St., Ann Arbor, Mich.
Olson, Thos. G. .....Elec. Eng., Rebecca St., Wilkinsburg, Pa.
Pier, Clarence L. .....Dairy Inspector, Brookings
Rilling, Harry M. .....P. G. Student, S. D. S. C.
Sanderson, Harry M. .....Farmer, Estelline
Shanley, Clarence .....Deputy Dairy Inspector, Brookings
Shea, Henry M. .....Asst. in Chem., S. D. S. C.
Shepard, Helen .....Teacher, Canova
Sloan, Edith .....Inst. Dom. Science, Falls City, Neb.
Somers, Grace .....Inst., S. D. S. C.
Sponholz, Lydia (Britzius) .....Park Rapids, Minn.
Templeton, Mabel (Johnson) .....Hetland
Wood, Ruth A. .....Inst. School of Agrl., S. D. S. C.

PHARMACY GRADUATES.

Eidsmoe, Clark T. .....Pharmacist, Arlington
Johnson, Arthur F. .....Pharmacist, Springfield, Minn.
Lawler, Frank M. .....Pharmacist, Watertown
Null, Ralph L. .....Pharmacist, Miller
Simpson, Wm. R. .....Pharmacist, Flandreau
Soule, Roy H. .....Druggist, Farmer
Tommeraasen, Corne .....Pharmacist, Madison
Wornson, Walter A. .....Student, S. D. S. C.

Class of 1914.

BACHELOR OF SCIENCE.

Armstrong, Lillian .....Teacher, New London, Iowa

Armstrong, Inez .....Teacher, Brookings
Ausman, Leslie V. .....Inst. in Agriculture, Clark
Britzius, Arno .....Inst. in Agriculture, Park Rapids, Mich.
Bushey, Alfred .....P. G. Student, Purdue Univ., Lafayette, Ind.
Casley, Lulu .....High School Instructor, Bryant
Chappell, Vincent ....Asst. in Dairying, Iowa State Col., Ames, Iowa
Clifford, Perry .....Asst. in Dairying, S. D. S. C.
Dulitz, Helen .....Inst. in Dom. Science, Startup, Wash.
Elliott, Robert .....Registrar, S. D. S. C.
Gilbertson, Geo. .....Asst. in Entomology, S. D. S. C.
Gotthold, Roy .....Music Student, Minneapolis, Minn.
Grinols, Hazel .....Teacher, Brookings
Gropengieser, Bessie .....Teacher, Onida
Halladay, Clinton .....Civil Engineer, Iroquois
Hartgering, Frances .....Teacher, Hecla
Hegdahl, Paul .....Farmer, Bruce, Mont.
Heck, Emil...Asst. in Civ. Eng., Purdue Univ., West Lafayette, Ind.
Hofstetter, Clarence .....Inst. Manual Training, St. Maries, Idaho
Knutson, Charlie O., Electrician with Westinghouse Mfg. Co.
..... Wilkinsburg, Pa.
Legler, Edward V., Instructor Manual Training .....
.....State Normal and Industrial School, Ellendale, N. D.
Esther Luebke .....Inst. Domestic Science, Stevensville, Mont.
Persun, Francis J. E. .....Inst. in Agr., Atwater, Minn.
Sexauer, Laura .....Teacher, Brookings
Shepard, Albert D., Asst. in Chem., U. of Illinois, Champaign, Ill.
Slightam, Kate .....Inst. in Dom. Science, Monroe, Wis.
Sherwood, Reginald .....Asst. in Chemistry, S. D. S. C.
Sloan, Sam .....Asst. in Agronomy, S. D. S. C.
Somers, Ruth .....Bank Clerk, Brookings
Valentine, Vey .....Extension Work, Mitchell
White, Henry D. .....Teacher, Florence
Wilkins, Scott ....Asst. in Agronomy, Iowa State Col., Ames, Iowa
Wood, Nina .....Teacher Epworth College, Epworth, Iowa
Wills, Ernest V. .....Electrician, Brookings

PHARMACY GRADUATES.

Eng, Julius .....Pharmacist, Flandreau
Kadinger, Lewis .....Pharmacist, Vienna
McDougal, Tyrell .....Pharmacist, Britton
Nelson, Lewis .....Student, S. D. S. C.
Ray, Winifred .....Student, S. D. S. C.
Shaw, Albert J. .....Pharmacist, Miller
Sivertson, Anna .....Druggist, Pierpont

Student List 1914-15

GRADUATE STUDENTS

Name.	Course.	Home.
Binnewies, Edward	G. S.	Brookings
Clifford, Perry	Agr.	Cresbard
Gilbertson, George	Agr.	Bryant
Rilling, Harry	Agr.	Brookings
Shea, Henry	Py.	Brookings
Sherwood, Reginald	G. S.	De Smet
Sloan, Sam L.	Agr.	Brookings
Mayland, George	Agr.	Brookings

COLLEGIATE STUDENTS

1915

SENIORS.

Name.	Course.	Home.
Bolland, Jens	Agr.	Pierpont
Caldwell, Florence	H. E.	Brookings
Caldwell, Lacey	Agr.	Brookings
Clarke, Bruce	Py.	Brookings
Cooley, Hazel	H. E.	Garretson
Culhane Alexander	Agr.	Brookings
Culhane, James	E. E.	Brookings
Drury, Lillian	G. S.	Chamberlain
Freeman, John	Agr.	Lead
Gardner Harry	Agr.	Sturgis
Gilbert, Gladys	G. S.	Brookings
Graham, William B.	Agr.	Freeport, Minn.
Hale, Ruth	H. E.	Carrington, N. D.
Iverson, Carrold	Agr.	Brookings
Johnson, Carl J.	C. E.	Brookings
Jones, A. Patti	H. E.	Whitewood
Keck, Dallas	Agr.	Brookings
Kremer, Frank	G. S.	Brookings
Lanphier, Ira	C. E.	Brookings
Lynch, Arthur	Agr.	Brookings
Nixon, Jessie	H. E.	St. Paris, Ohio
Nord, Florence	H. E.	Brookings
Pilmer, Miller	E. E.	Brookings
Potter, Ernest C.	G. S.	Athens, Penn.
Serles, Earl R.	Py.	Salem
Wornson, Walter	Py.	Brookings

JUNIORS.

Name.	Course.	Home.
Abott, Cleveland	Agr.	Watertown
Allison, Arthur	E. E.	Cavour
Armstrong, Gladys	G. S.	Brookings
Anderson, Eldon	Agr.	Pierre
Austin, Ethel	H. E.	Brookings
Avery, Blanche	H. E.	Alexandria
Bergeim, Joseph	G. S.	Brookings
Caldwell, Kate	H. E.	Brookings
Calkins, Fred	E. E.	Miller
Dawes, Adelia	H. E.	Fulton
Dott, Delia	H. E.	Salem
Drayer, Raymond	E. E.	Frankfort
Evans, Roy	E. E.	Brookings
Evers, Clarence	M. E.	Big Stone
Fish, Warren	M. E.	Ipswich
Fridley, Harry	Agr.	Brookings
Fryer, Julia	H. E.	Doland
Gold, Ralph	E. E.	Big Stone
Greene, Bernice	H. E.	Parker
Greeves, Bertha	H. E.	Miller
Grudem, William	M. E.	Brookings
Hanten, Matt	Agr.	Watertown
Heiser, Marie	H. E.	White
Houghton, Jay	C. E.	Brookings
Humphrey, Francis	E. E.	Howard
Jennings, Hollace	Agr.	Estelline
Jensen, Frank	Agr.	Mitchell
Jensen, Ross	Agr.	Fargo, N. D.
Jerlow, Morris	Agr.	Carthage
Johnston, Ralph	Agr.	Rapid City
Kennard, George B.	Agr.	Brookings
Knutson, Robert	Agr.	Brookings
Lanphier, Eva	H. E.	Brookings
Laxson, Leroy	Agr.	Canton
Lynch, Edward	Agr.	Brookings
Lynch, Ruth	H. E.	Brookings
Matson, Mamie	H. E.	Willow Lake
Miller, Harold	G. S.	Brookings
Myers, George	Agr.	Redfield
Nelson, Lewis E.	Py.	Oldham
Peterson, Harold	M. E.	Sioux Falls
Peterson, Leigh	Agr.	Watertown
Rishoi, Alfred	Agr.	White

Rowe, Nellie	H. E.	Sioux Falls
Rowe, Charles S.	Agr.	Sioux Falls
Sheehan, Bernard	Agr.	Aberdeen
Slaatta, Emma	H. E.	Wilmot
Skinner, Cecil	Agr.	Brookings
Slaymaker, Elizabeth	G. S.	Brookings
Sloan, Janet	H. E.	Brookings
Sloan, Lyle	E. E.	Alexandria
Smith, Homer	G. S.	Egan
Waltner, B. P.	Agr.	Freeman
Warner, Harry	Agr.	De Smet
Weber, George	G. S.	Farmer
Wing, Lesher	M. E.	Aladdin, Wyo.

SOPHOMORES.

Name.	Course.	Home.
Ashbaugh, Virgil	Agr.	Brookings
Abbott, Walter G.	Py.	Tyndall
Ainsworth, Ernest	Agr.	Brookings
Bennett, L. L.	C. E.	Canton
Blakeley, Wesley	Py.	Brookings
Briggs, Cyrus	Agr.	Brookings
Browning, Lenore	G. S.	Brookings
Browning, Ruth	G. S.	Brookings
Chappell, Mabel	H. E.	Brookings
Colliton, Ora	Py.	Brookings
Cook, Orlan P.	E. E.	Clear Lake
Cunningham, Ray	G. S.	Conde
Dakin, Norman	Agr.	Brookings
Emerson, William	C. E.	Castlewood
Fjeld, Erastus	Agr.	Brookings
Giannonatti, Elene	Py.	Brookings
Glennon, Daniel C.	Agr.	Huron
Graber, Elizabeth	H. E.	Freeman
Gregory, Eva	H. E.	Alexandria
Gullick, Blanche	H. E.	Brookings
Haag, Oscar	E. E.	Frankfort
Hanson, Otto W. H.	Agr.	Brookings
Haugen, Ben	Py.	Hartford
Heiser, Elizabeth	H. E.	White
Hill, Joe	Agr.	Mitchell
Holliday, Faye	H. E.	Brookings
Holmes, Walter	Agr.	Brookings
Johnson, Ralph	Agr.	Hetland
Johnson, Myrtle	H. E.	Brookings

Jones, Horace	Agr.	Mitchell
Karlstad, C. H.	Agr.	Dempster
Keating, Pearle	H. E.	De Smet
Kopperud, Harmon	Agr.	Lake Preston
Langdon, Hazel	Py.	Clear Lake
Lanphier, Harriet	H. E.	Brookings
Lawler, Joe	C. E.	Miller
Lee, Vera	H. E.	Brookings
Little, David	Agr.	Wagner
Little Guy	Py.	Hazel
Lothrop, Orlin	E. E.	Academy
Loesch, William	Py.	Oldham
McCoy, Dell	C. E.	Miller
Malone, Robert S.	C. E.	Huron
Mathiesen, Homer	Agr.	Watertown
Miller, H. J.	M. E.	Hudson
Mills, Oscar	Agr.	Wall
Nord, Daisy	H. E.	Brookings
Olson, Edward	Py.	Alcester
Peterson, Axel	Agr.	Sioux Falls
Pope, Donald	E. E.	Estelline
Randall, Harry	Py.	Arlington
Rasmussen, Claude	Agr.	Bridgewater
Riddle, Eugene	Agr.	Waubay
Riis, Jens	Agr.	Sindberg, Denmark
Robbins, Clarence	Agr.	Carthage
Rudd, Charles	E. E.	Orient
Sanson, Freda	H. E.	Buffalo Gap
Scholten, Wm. K.	Agr.	Inwood, Ia.
Severson, Florence	H. E.	Brookings
Shaw, Happy	H. E.	Madison
Sherwood, Aubrey	Agr.	De Smet
Skinner, Margaret	G. S.	Brookings
Smith, Harry	C. E.	Miller
Soule, Ruth E.	H. E.	Brookings
Stoddart, Mattie	H. E.	Brookings
Styer, Clarence	E. E.	Huron
Stevens, Leo	C. E.	Sioux City, Ia.
Swenehart, Millie	H. E.	Brookings
Swift, Eugene	Agr.	Brookings
Temmey, Kathryn	H. E.	Onida
Thomas, Cornelius	Py.	Marion
Thornby, Mary	H. E.	Deadwood
Tolagson, Clarence	Py.	Brookings
Wagner, Colman	Agr.	Selby

Wattson, Donald	Agr.	Chamberlain
Westgate, Louis	Agr.	Adrian, Mich.
Winright, George	Agr.	Alexandria
Wix, Elsie	G. S.	Hetland
Ziegler, Arlene	H. E.	Brookings

FRESHMEN.

Name.	Course.	Home.
Ahlers, Naomi	H. E.	Webster
Anderson, Adlai E.	Agr.	Mitchell
Anderson, A. Edward	Py.	Watertown
Anderson Leslie	E. E.	Brookings
Ashbaugh, Alfred	Agr.	Brookings
Aslakson, Carl	M. E.	Erwin
Ayer, Horace	Agr.	Vermillion
Bacon, Grace	H. E.	Brookings
Barrett, Vinal	G. S.	Doon, Ia.
Beals, Edna	H. E.	Brookings
Berglind, Axel	Agr.	Brookings
Blakeman, Elizabeth	G. S.	Columbus, Mont.
Boswell, Mildred	H. E.	Castlewood
Brookens, Clarence	Agr.	Parker
Buck, Ruth	H. E.	Bruce
Bunday, Ray	G. S.	Brookings
Bunt, Agnes	H. E.	Alexandria
Bulger, Jacob	C. E.	White
Burton, Starling A.	Py.	Bowdle
Cabel, Franzella	H. E.	Hudson
Caldwell, Jessie	H. E.	Brookings
Carson, Franklin	M. E.	Cherry Creek
Chenoweth, Orda	Agr.	Wolsey
Coughlin, Thomas	Agr.	Carthage
Dahl, Clarence	Py.	Langford
Dewing, Sara	G. S.	Brookings
Dibble, Robert	G. S.	Beresford
Dokter, John	Agr.	Andover
Drury, Joseph H.	Agr.	Chamberlain
Durfee, Rossiter	Agr.	Huron
Dutt, Earling	C. E.	Beulah, Wyo.
Eberlein, Frank	Agr.	Aurora
Enright, Mary	H. E.	Brookings
Evans, Margaret	H. E.	Brookings
Frease, Hazel	H. E.	Rapid City
Frease, Kathryn	H. E.	Rapid City
Gates, Edgar	Agr.	Rapid City

Gates, Leon F. ..... Agr. ..... Rochester, Minn.
Gaylord, Clair ..... G. S. ..... Brookings
Gilbert, Charles ..... Agr. ..... Clark
Ginsbach, Clark ..... Agr. ..... Hartford
Graber, Ben ..... G. S. ..... Freeman
Greeves, Ida ..... H. E. ..... Miller
Grinols, Mavis ..... H. E. ..... Brookings
Grinols, Violet ..... G. S. ..... Brookings
Guse, Edwin H. ..... Agr. ..... Bryant
Halligan, Marie ..... G. S. ..... Bryant
Hamilton, Homer ..... G. S. ..... De Smet
Hanson, Hazel ..... G. S. ..... Brookings
Hawbecker, James R. ..... Agr. ..... La Grand, Ia.
Hemingway, Robert ..... Py. ..... Mattoon, Wis.
Hewett, Howard ..... Agr. ..... Arlington
Hewett, Floyd ..... G. S. ..... Arlington
Holzman, Albert J. ..... Py. ..... Bowdel
Holmes, Clara ..... H. E. ..... Brookings
Hoon, Glenn ..... Agr. ..... Kadoka
Hoover, Harold ..... Agr. ..... Brookings
Horsfall, Alice ..... H. E. ..... Flandreau
Hough, Orilla ..... H. E. ..... Brookings
Hough, Olga ..... Sec. ..... Glenham
Hougen, Sherman ..... M. E. ..... Wilmot
Hoven, Michael ..... Sec. ..... Selby
Hoven, Jacob ..... Sec. ..... Selby
Hutchinson, Ethel ..... H. E. ..... Webster
Hyde, Hara ..... C. E. ..... Brookings
Johnson, Gustaf ..... Agr. ..... Lake Norden
Johnson, John L. ..... Agr. ..... Lake Norden
Kneebone, John ..... Agr. ..... Chrisholm, Minn.
Ladd, Leonard ..... G. S. ..... Brookings
LaSell, Leola ..... H. E. ..... Waubay
Lien, Ruby ..... H. E. ..... Brookings
Lister, P. B. ..... G. S. ..... Bixby
Lynn, Jennie ..... H. E. ..... Huron
Mann, Lyman L. ..... Agr. ..... Clark
Mathews, Hubert ..... G. S. ..... Brookings
Matthews, Ray H. ..... Agr. ..... Howard
McFadden, Edgar ..... Agr. ..... Webster
Michaels, Ernest ..... C. E. ..... Watertown
Miller, Arthur ..... Agr. ..... Madison
Myrland, Clarence ..... Agr. ..... Onawa, Ia.
Nelson, Floyd ..... Sec. ..... Brookings
Nelson, Arthur ..... Agr. ..... Rochester, Minn.

Olson, Wm. D.	G. S.	Volga
Perisho, Leland	Agr.	Carmel, Ind.
Otterness, Florence	G. S.	Brookings
Peterson, Edward	Py.	Viborg
Pickett, Hubbie	E. E.	Brookings
Pier, Lenora	H. E.	Woonsocket
Poage, Ellis	E. E.	De Smet
Randall, Elizabeth	H. E.	Brookings
Rasmussen, Ethel	Py.	Lake Preston
Rasmussen, Ray	Agr.	Bridgewater
Reid, Phyllis	H. E.	Castlewood
Revell, James E.	Agr.	Brookings
Rilling, Elsie	H. E.	Brookings
Ronne, Anthony	Py.	Rapid City
Ross, Jerry B.	Agr.	Mellette
Rugg, Georgia	H. E.	Artesian
Saum, Donald B.	M. E.	Brookings
Scadden, Richard E.	Py.	White
Shepard, James Jr.	G. S.	Brookings
Simons, Stella	H. E.	Castlewood
Sinclair, Mildred	H. E.	Beresford
Skinner, Nettie	G. S.	Onida
Spawn, Elmo C.	E. E.	Chester
Sohn, Elmer	Agr.	Huron
Steensland, Theodore	Agr.	Beresford
Stone, Helen	G. S.	Watertown
Stone, Mabel	G. S.	Watertown
Swenson, Joseph D.	Agr.	Fulton
Stratton, Dale	G. S.	Miller
Strachan, Thomas	Agr.	Chelsea
Tabor, Floyd E.	Py.	Garretson
Thelin, Guy A.	Agr.	Sioux Falls
Thompkins, Arthur	Agr.	Wyoming, Ia.
Urton, John Raymond	Agr.	Fulton
Walker, Bruce W.	Agr.	Huron
Walters, Clifton	Agr.	Bruce
Woodruff, Victor	G. S.	Miller

SPECIALS.

Name.	Course.	Home.
Blakely, Mrs. C. H.	H. E.	Brookings
Brown, Mrs. F. E.	Sec.	Brookings
Cramer, Wilson	Agr.	Brookings
Culhane, Roger	Sec.	Brookings
Locke, Mrs. Alice	H. E.	Brookings

Marquardt, Elizabeth	H. E.	Wentworth
Miller, Mrs. Krete	H. E.	Brookings
Mitchell, Arthur	G. S.	Brookings
Steece, F. B.	Agr.	Wessington Springs

PREPARATORY STUDENTS.

Fourth Year.

Name.	Home.
Blakeley, Clifford	Brookings
Bucholz, Adolph	Brookings
Bucholz, Rudolph	Brookings
Colliton, Dollie	Brookings
Criswell, Robert	Brookings
Emly, Joseph	Pekin, Ind.
Goddard, Bertin	Hot Springs
Green, Carrol	Brookings
Lynn, Floyd	Wolsey
Millard, Lloyd	Garretson
Mitchell, Samuel S.	Watertown
Neal, Frank	Aurora
Piper, Mamie	Carpenter
Platt, Ida	Viborg
Poulson, Clyde	Castlewood
Shaw, Inez	Estelline
Templeton, Elva	Wessington
Wilson, Edith	Brookings
Woodruff, Lewis	Wessington
Wood, Milton	Brookings

Third Year.

Name.	Home.
Alrick, Lillia	Brookings
Berg, Arnold	Stockholm
Burke, Milton	Rapid City
Burgess, John	White
Chenoweth, Grace	Wolsey
Drees, Bertha	Timber Lake
Farries, Russell	Hitchcock
Fasbender, Veronica	Hendricks, Minn.
Felton, Hazel	Bushnell
Feuerhelm, Elva	Brookings
Fjeld, Kamilla	Brookings
Griffith, Harrold	Cresbard

Hansen, Eva ..... Brookings
Hasle, Arthur ..... Brookings
Johnson, Esther ..... Brookings
Koch, Maggie ..... Miller
Loyd, J. F. ..... Dubois, Wyo.
Merriman, Grace ..... Carpenter
Rogers, John ..... Conde
Smith, Clarence ..... Henry
Trumm, Archie ..... Hayti
Wilson, Madge ..... Brookings
Wolber, Oscar ..... Brookings

Second Year.

Name.	Home.
Anderson, Hanna	Volga
Beals, Daniel	Brookings
Biggar, Ellen	Brookings
Burdett, William	Arlington
Cooley, Haldon	Garretson
Duennermann, Edward	Smithwick
Friday, Geneva	Mineral Point, Wis.
Gilbert, Arthur	Buffalo
Johnson, Elmer	Doland
Ondell, Manoah	Conde
Oyloe, Gerhart	Brookings
Pfeiffer, Helena	Volin
Phipps, Lynn	Garden City
Pope, Clarence	Miles City, Mont.
Smith, Charles	Brookings
Stangland, Elmer	Brookings
Steuerwald, Paul	Wolsey
Swering, Lucy	Brookings
Worden, Winnie	Brookings

First Year.

Name.	Home.
Anderson, Alma	Hitchcock
Aronson, Alfred	Strandburg
Bryan, Ruth E.	Oakes, N. D.
Felton, Muriel	Bushnell
Johnson, Helman	Brookings
Kreiman, Walter H.	Hitchcock
Lee, Henry S.	Brookings
Lindgren, Elsie	Florence
McCartney, Willard	Conde

Milhouse, Roy ..... Alpena
Millar, Orville ..... Kasper
Moore, Eva ..... Denver, Colo.
Nesseth, Gladys ..... Volga
Perrin, Alta ..... Brookings
Peterson, Ira ..... Lily
Porter, R. Paul ..... Onida
Reeves, Frank ..... Selby
Rude, Ida ..... Brookings
Schulz, Hattie ..... White
Severson, Lenora ..... Volga
Stone, Willis ..... Cresbard
Thompson, Gaylord ..... Alexandria
Turner, Aris ..... Vienna
Wold, Henry G. ..... Brookings

MUSIC STUDENTS.

Name.	Course.	Home.
Abbot, Walter	Violin	Tyndall
Alrick, Lillia	Piano	Brookings
Anderson, Alma	Piano	Hitchcock
Anderson, Leslie	Cornet	Brookings
Baker, Delilah	Voice	Aurora
Bryan, Ruth	Piano	Oakes, N. D.
Bunday, Ray	Clarinet	Brookings
Button, Mrs. H. L.	Voice	Brookings
Dokter, John	Clarinet	Andover
Drees, Bertha	Piano	Timber Lake
Drury, Joseph	Cornet	Chamberlain
Fasbender, Veronica	Piano	Hendricks, Minn.
Fjeld, Kamilla	Piano	Brookings
Frease, Kathryn	Piano	Rapid City
Fryer, Julia	Piano & Voice	Doland
Green, Carrol	Piano & Voice	Brookings
Graber, Elizabeth	Piano	Freeman
Halligan, Marie	Piano & Voice	Bryant
Hamilton, Homer	Violin	DeSmet
Haugen, Minnie	Piano	Wallace
Horsfall, Alice	Piano	Flandreau
Hutchinson, Ethel	Piano	Webster
Johnson, Elmer	Violin	Doland
Johnson, Esther	Piano	Brookings
Jones, Horace	Clarinet	Mitchell

Koch, Maggie	Piano	Miller
Kopperud, Harmon	Clarinet	Lake Preston
Loyd, J. F.	Voice, Piano & Violin	Dubois, Wyo.
Moore, Eva	Piano & Voice	Denver, Colo.
Ondell, Manoah	Voice	Conde
Otterness, Florence	Piano	Brookings
Oyloe, Gerhart	Cello & Voice	Brookings
Pfeiffer, Helena	Piano	Volin
Platt, Ida	Piano	Viborg
Purdy, Ruth	Piano	Brookings
Rude, Ida	Piano	Brookings
Saum, Donald B.	Clarinet	Brookings
Steuerwald, Paul	Piano	Wolsey
Stone, Mabel	Piano	Watertown
Stone, Helen	Voice	Watertown
Swering, Lucy	Piano	Brookings
Templeton, Elva	Piano	Wessington
Thornby, Mary	Voice	Deadwood
Turner, Aris	Piano	Vienna
Waffle, Fern	Piano & Voice	Marion, Ia.
Wagner, Colman	Violin	Selby
Walters, Clifton	Violin	Bruce
Youngberg, Guy E.	Violin	Brookings
Youngberg, Mamie	Piano & Voice	Brookings

SCHOOL OF AGRICULTURE.

Fourth Year.

Name.	Home.
Gilbert, Winnie	Prosser, Wash.
Price, W. G.	Tulare
Slocum, Marion A.	Ipswich
Ruhlman, Donald	Rockham

Third Year.

Name.	Home.
Arp, Carl	Chamberlain
Allinson, Earl	Gary
Anderson, Edna	DeSmet
Bower, Ralph	Correctionville, Ia.
Berry, Earl	Delmont
Bierman, Christ	Mansfield
Greguson, Helmer	Inwood, Ia.
Glidden, Walter	Millboro
Gigg, Lucille	McClure

Graves, C. L. ..... Ashton
Howell, Everett ..... Florence
Griffith, Gar ..... Cresbard
Holly, Max ..... Dempster
Holtquist, Alder ..... Milbank
Halgerson, Ralph ..... Canastota
Holt, Raymond ..... Clear Lake
Horen, Clarence ..... Cresbard
Hinsvark, Melvin ..... Brandt
Halverson, Hilda ..... Kenneth
Hatlestad, Laura ..... Garretson
Horsley, Alta ..... Virgil
Johnson, Gladys ..... Doland
Kasten, Alfred ..... Humboldt
Keck, Marvin ..... Brookings
Keck, Myrtle ..... Brookings
Klungness, Tilda ..... Garretson
Kvalshaug, Fred ..... Centerville
Larson, Lloyd J. ..... Warner
Lindsey, Grace ..... Brookings
Mueller, Robert ..... Madison
Nelson, Alfred ..... Clair City
Onstine, Everett ..... Flandreau
Peterson, Lawrence ..... Virgil
Payne, Foster ..... Forbes
Pirlet, Harry ..... Lake Preston
Perso, Ruth ..... Brookings
Petry, Anna ..... Hawarden, Ia.
Prunty, Francis ..... Andover
Spear, Kenneth ..... Draper
Spear, Mary A. ..... Draper
Sloat, Roy ..... Lowry
Sloat, Ben C. ..... Lowry
Slade, Allan ..... Fulton
Sloan, James ..... Brookings
Smith, Maurice ..... Henry
Swanson, Elmer ..... Hawarden, Ia.
Sullivan, William ..... Montrose
Twidwell, Mabel ..... Brookings
Wallace, Henry ..... Britton
Wallace, Norman ..... Britton
Wallace, Percy ..... Britton
Wilcox, Samuel ..... Brookings
Wilcox, Mae ..... Brookings
Witzel, Roy ..... Letcher

Second Year.

Name.	Home.
Amsden, George	Groton
Anderson, Ida	Tulare
Andreessen, Cornelius	Tea
Brown, Roy	Yankton
Bishop, Julius	Montrose
Bakke, Elmer	Webster
Belk, Vernon	Henry
Best, Charles	Edmond
Bisgard, Elmer	Waubay
Bury, Nicholas	Holmquist
Berg, Harry	Stockholm
Bjerke, Elmer	Andover
Brose, Arthur	Arlington
Corothers, John	Clear Lake
Chrisler, Kenneth	Harrisburg
Carley, Robert	Doland
Crisman, Leo	Armour
Coye, Floyd	Kadoka
Doner, David	Gorman
Dvorak, Frank	Redfield
Eaton, Simon	Miller
Frederichsen, Martin	Big Stone
Griffin, Phillip	Hot Springs
Green, Ethan	Lake Preston
Goodwin, John	Yankton
Halverson, Alma	Kenneth, Minn.
Hawes, Hazel	Sherman
Janssen, George	Castlewood
Jencks, Arden	Bancroft
Johnson, Hartwick	Goodwin
Jones, Charles	Kirley
Kirkwood, Elizabeth	Rollinsdale
Knudson, Anna	DeSmet
Knudson, Victor	DeSmet
Kustes, George	Mt. Vernon
Lindgren, Arnold	Florence
Legg, Clarence	Artesian
Moyle, Edwin	Westport
McFadden, Joseph	Huron
Moen, Louis	Effington
Mueller, Laura	Madison
McMahon, Russell	Bruce
Nord, Alfred	Milbank

Otto, Irving ..... Chamberlain
Payne, Benjamin ..... Forbes
Powers, Harry ..... Delmont
Peterson, Royal ..... Akron, Ia.
Peterson, Phillip ..... Brookings
Peterson, P. D. ..... Virgil
Peterson, William ..... Lily
Peck, Carl ..... Belle Fourche
Paulson, Joseph ..... Brandt
Reinecke, Raymond ..... Redfield
Rude, Grant ..... Brookings
Stenson, Stenie ..... Fulton
Smith, Joseph ..... Sioux Falls
Sueltz, Arthur ..... Groton
Sloat, Judd ..... Lowry
Sloan, Lester ..... Brookings
Seaver, Lloyd ..... Garden City
Scott, Lester ..... Clark
Tyler, Arthur ..... Renner
Vearrier, Maude ..... Virgil
Wright, George ..... Valley Springs
Wolverton, Don ..... Doland
Westgaard, Hannah ..... Astoria
Wolf, Marie ..... Esmond

First Year.

Name.	Home.
Andrews, Freeman	Lake Andes
Aggergaard, Peter	Irene
Ackley, Bliss	Bryant
Anderson, Melvin	Valley Springs
Anderson, Conrad	Brandon
Amsden, Wallace	Groton
Abernathy, Ella	Richards
Abernathy, Milam	Richards
Brown, Carl	Lucas
Bapp, William E.	White Rock
Bush, Emmet	Colome
Best, Dewey	Esmond
Best, Earl	Esmond
Bakke, Oliver	Webster
Bisgard, Roy	Waubay
Blodgett, Roy	Gayville
Bevington, James	Ree Heights
Bierman, George	Mansfield

Bend, Hazel ..... Shabona, Ill.
Brandle, Oscar ..... Pierpont
Bly, Bertha ..... Garretson
Conrad, DeWitt T. ..... Mitchell
Corothers, James ..... Clear Lake
Crisman, Roy ..... Armour
Christofferson, Anna ..... Lake Preston
Crosser, Ora ..... Brookings
Cruson, Ralph ..... Miller
Curtis, Leroy ..... Boulder, Colo.
Cwach, Helen ..... Yankton
Davies, Chester ..... Cresbard
Davies, Elmer ..... Cresbard
Davis, Ralph ..... Hurley
Engen, Edward ..... Canton
Fasbender, Benjamin ..... Hendricks, Minn.
Frandsen, Josephine ..... Brookings
Glenn, J. Albert ..... Canastota
Griffith, Victor ..... Bryant
Grinols, Lance ..... Brookings
Gustafson, Ben ..... Orion
Gross, Joe ..... Freeman
Gross, Harold O. ..... Madison
Hanson, Carl ..... Lily
Hanson, Albert ..... Elk Point
Hawkes, Walter ..... Pedro
Hasz, Emanuel ..... Parkston
Haden, Melvin ..... Toronto
Harris, Clayton ..... Bryant
Haxby, David ..... Hardingrove
Heath, Ella ..... Brookings
Homewood, Madge ..... Wessington Springs
Hosmer, Thomas ..... Fedora
Hawes, Bell ..... Sherman
Hamak, Mary ..... Wecota
Handur, Eddenna ..... Brookings
Hoogshaugen, Wm. ..... Parker
Haugen, Minnie ..... Wallace
Jensen, James ..... Erwin
James, Donald ..... Plankinton
Johnson, Clifford ..... Brookings
Jordan, Elmer ..... Waterloo, Wis.
Johnson, Reuben ..... Groton
Johnson, Richard ..... Groton
Jones, Harvey L. ..... Delmont

James, Erma ..... Plankinton
Judd, Birdie ..... Brookings
Kubowitz, Herbert ..... Herreid
Knox, Charles ..... Binder
Krogvig, Mark ..... Mission Hill
Krogvig, Anna ..... Mission Hill
Klopstad, Andrew ..... Burbank
Lewis, Cecil ..... Ashton
Linka, John ..... Tyndall
Lindgren, Jennie ..... Florence
Miles, Lynn ..... Conde
McGinnis, Elmer ..... Tulare
Merriman, Arthur ..... Carpenter
Murphy, Clyde ..... Oldham
Munson, Albin ..... Lily
Neyhart, Earl ..... Gorman
Nolte, Otto ..... Butler
Nelson, Helen ..... Claire City
Otto, Richard C. ..... Tulare
Paul, Eva ..... Doland
Paulson, Albert ..... Centerville
Price, Floy ..... Tulare
Plagens, Oscar ..... Garden City
Peterson, Ben ..... Fedora
Peterson, Norman ..... Fedora
Peck, Reuben ..... Belle Fourche
Pederson, Clarence ..... Gayville
Pederson, Agnetta ..... Gayville
Peterson, Inga ..... Lily
Petry, Kathryn ..... Hawarden, Ia.
Poppen, Grace ..... Estelline
Putzke, Edna ..... Humboldt
Putzke, Lawrence ..... Humboldt
Rasmuson, Arne ..... Winfred
Rehnke, Ella ..... Crandon
Rehnke, Ernest ..... Crandon
Rehnke, Herbert ..... Crandon
Rupple, Leo. ..... Alpena
Rundell, Howard ..... Hurley
Rundell, Leslie ..... Hurley
Rang, Ernest ..... Parker
Rea, Clarence ..... Garden City
Rovang, Theodore ..... Corson
Rohl, Willie ..... Mobridge
Robbins, Albert ..... Spencer

Ravndal, G. B. ..... Novak
Sathre, Sam ..... Trent
Stewart, Myrvin ..... Britton
Sohrt, John ..... Rockham
Stine, Robert ..... Webster
Shank, Ray ..... Aurora
Seaver, Willis ..... Garden City
Sorenson, James C. ..... Trent
Sorenson, Elmer ..... Erwin
Sisson, Newell ..... Sioux Falls
Schlobohm, Matie ..... Aurora
Schwartz, Arthur ..... Miller
Stitt, Carrol ..... Hitchcock
Stitt, Harold ..... Hitchcock
Strunk, John ..... Irene
Strunk, Bernhard ..... Irene
Svenson, Alfred ..... Ethan
Stevens, Susie ..... Brookings
Shordicke, Ivetta ..... Brookings
Schult, Raymond ..... Doland
Seagreen, Grace ..... Turton
Tvedt, Leonard ..... Volga
Trygstad, Joseph ..... Brookings
Thompson, Lewis ..... Mission Hill
Tate, May ..... Brookings
Vallier, Ruth ..... Colman
Vig, Inga ..... Dell Rapids
Wagner, Walter ..... Elk Point
Wein, Eddie ..... Butler
Willrodt, Harold ..... Chamberlain
Wolters, Arnold ..... Winfred
Wolner, Henry ..... Frankfort

SUMMER SCHOOL STUDENTS.

Name.	Home.
Ammons, Mina	Aurora
Ammons, Ruth	Aurora
Anderson, Anna	St. Lawrence
Anderson, Georgia	Brookings
Arvidson, Mae	Arlington
Bagley, Frances	Brookings
Bancroft, Harriett	Columbus, O.
Bane, Harriet	Aurora

Bane, Mae ..... Aurora
Board, Mary ..... Brookings
Bentson, Edna ..... White
Berg, Helena ..... Brookings
Blakeley, Herbert ..... Brookings
Bogstie, Emma ..... Brookings
Blakeslee, Mabel ..... Brookings
Brictson, Charmain ..... Brookings
Brictson, Thelma ..... Brookings
Buck, Florence ..... Bruce
Burnham, Mildred ..... Bushnell
Bushnell, Edna ..... Brookings
Butler, Mrs. T. R. ..... Brookings
Caldwell, Florence ..... Brookings
Canfield, Ethel ..... Brookings
Carroll, Mayme ..... White
Casley, Lulu ..... Brookings
Catlett, Winifred ..... Brookings
Chappell, Bess ..... Brookings
Cheever, Harriett ..... Brookings
Cochran, Effie ..... Miller
Cole, Harold ..... Brookings
Cole, Ima ..... Brookings
Cole, Lynn ..... Brookings
Copping, Edna ..... Bushnell
Culbertson, Mattie ..... Brookings
Davis, Elmer ..... Brookings
Dawes, Adelia ..... Brookings
Donaldson, Myrtle ..... Brookings
Dunn, Ray ..... Bryant
Eberlein, Clara ..... Aurora
Erickson, Esther ..... Bruce
Erickson, Lottie ..... Bruce
Erickson, Minnie ..... Bruce
Evans, Addie ..... Brookings
Evers, Clarence ..... Brookings
Feeney, Ruth ..... Elkton
Flemming, Gertrude ..... Elkton
Flemming, Julia ..... Elkton
Flemming, Loretta ..... Elkton
Francis, Ada ..... Brookings
Freeman, John ..... Brookings
Friedel, Amanda ..... Bruce
Fryer, Julia ..... Brookings

Gehant, Marie ..... Aurora
Getty, Janey ..... Brookings
Gilbert, Gladys ..... Brookings
Godron, Mabel ..... White
Godron, Paul ..... White
Greenley, Jennie ..... Brookings
Gunderson, Ida ..... Volga
Handwerk, Clara ..... Brookings
Hanson, Ellen ..... Lily
Hanson, Josephine ..... Lily
Hanson, Mabel ..... Lily
Haugen, Berdick ..... Brookings
Hays, Constance ..... Elkton
Heck, Josephine ..... Elkton
Hendricks, Mae ..... Brookings
Higgins, Ella ..... Elkton
Hinch, Ruby ..... White
Hoffman, Martha ..... Bruce
Hoffman, Theresa ..... Bruce
Holmes, Blanche ..... Brookings
Holmes, Margaret ..... Brookings
Honan, Mamie ..... Brookings
Howe, Matilda ..... Cottonwood
Howe, Sadie ..... Cottonwood
Hoy, Belle ..... Aurora
Huyck, Nina ..... Gettysburg
Iverson, Selma ..... Brookings
Jamison, Nellie ..... White
Jarman, Ruby ..... Brookings
Jarvis, Ruth ..... Brookings
Jepson, Alma ..... Arlington
Jerde, Edith ..... Brookings
Jessen, Lora ..... White
Johnson, Myrtle ..... Brookings
Johnston, Sara ..... Brookings
Judd, Laura ..... Bushnell
Karlstad, Julia ..... Brookings
Karlstad, Selma ..... Brookings
Kelly, Anna ..... Estelline
King, Esther ..... White
Kirby, Pearle ..... Aurora
Knutson, Frances ..... Brookings
Korte, Anna ..... Aurora
Krumm, Lillian ..... Bruce

Lamb, Matilda ..... Brookings
Lanphier, Hattie ..... Brookings
Larson, Ora ..... Brookings
Lawler, Frances ..... Kandiyohi, Minn.
Lawler, Josie ..... Kandiyohi, Minn.
Lawler, Rosella ..... Kandiyohi, Minn.
Lehner, Beatrice ..... Brookings
Lein, Myrtle ..... Brookings
Lein, Ruby ..... Brookings
Looysen, Iva ..... White
Looysen, Sylvia ..... White
Lortscher, Rufus ..... Elkton
Lynch, Edward ..... Brookings
Madden, Marieta ..... Brookings
Mathews, Cornelia ..... Brookings
Mathews, Hubert ..... Brookings
Matson, Mamie ..... Brookings
McElmurry, Loretta ..... Brookings
McKinnon, Margaret ..... Brookings
McMillan, A. L. ..... Alpena
McMillan, O. G. ..... Alpena
McCarthy, Rose ..... Elkton
McCoy, Erdman ..... Brookings
Miller, Harold ..... Brookings
Morris, Edna ..... Aurora
Morris, Elsie ..... Aurora
Nelson, Laura ..... Brookings
Nilsson, Anna ..... Altamont
Nixon, Jessie ..... St. Paris, O.
Nord, Florence ..... Brookings
Olson, Johanna ..... Brookings
Otterness, Florence ..... Brookings
Otterness, Ida ..... Brookings
Parker, Paul J. ..... Brookings
Pease, Myrtle ..... Brookings
Perso, Ruth ..... Brookings
Peterson, Edith ..... Brookings
Peterson, Helen ..... Brookings
Phillips, Blanche ..... Aurora
Potter, Blanche ..... White
Rahn, Sophronia ..... Verdi, Minn.
Revel, Marie ..... Brookings
Rice, Julia ..... Flandreau
Roberts, Flora ..... Elkton

Ross, Ethel ..... Arlington
Scharf, Sadie ..... Grindstone
Schlatter, C. F. ..... Brookings
Schulz, Hattie ..... White
Scott, Ethel ..... Volga
Shaw, Lucy ..... Castlewood
Shepard, Helen ..... Brookings
Sherwood, Lila ..... White
Siberts, Miriam ..... Brookings
Sickler, Lucille ..... Wessington Springs
Sickler, Mrs. George ..... Wessington Springs
Sivert, Vera ..... Elkton
Skinner, Nettie ..... Onida
Sloan, Edith ..... Brookings
Sloan, Janet ..... Brookings
Slocum, Lyla ..... Brookings
Smith, Mamie ..... Brookings
Smith, Raymond ..... Bryant
Somers, Grace ..... Brookings
Soule, Neva ..... Brookings
Stermer, Laura ..... White
Strong, Will ..... Elkton
Stumley, Otelia ..... Volga
Towey, Alice ..... Elkton
Towey, Margaret ..... Elkton
Trygstad, Charlotte ..... Brookings
Trygstad, Daniel ..... Brookings
Trygstad, Marie ..... Brookings
Turner, Lona ..... Brookings
Tuttle, Minnie ..... Arlington
Watson, Edith ..... Brookings
Weber, Anna ..... Brookings
Wendelken, Maud ..... Elkton
Wendelken, Harry ..... Elkton
Wilson, Edith ..... Elkton
Wilson, Ella ..... Elkton
Winters, Minnie ..... Brookings
Wood, Laura ..... Brookings
Woodard, — — ..... Volga
Woodle, Mae ..... Elkton
Wright, Ora ..... New Underwood
Yule, Harold ..... Brookings
Zebell, Hulda ..... Estelline
Zumwalt, W. W. ..... Columbia

SHORT COURSES.

Cream Testing Course.

Name.	Home.
Bette, P. L.	Watertown
Binandt, A. H.	Watertown
Bishop, Perry	Bruce
Clinton, P. E.	Beebe
Cowling, W. E.	Sioux City, Ia.
Fischer, Chas. H.	Beebe
Gunderl, Wm.	Tolstoy
Hich, John R.	Eureka
Hughart, G. R.	Mitchell
Kalbing, John	Omaha, Neb.
Kegley, J. L.	Sioux City, Ia.
Kinport, M. K.	Mitchell
Morse, J. R.	Dell Rapids
Robinson, F. D.	Redfield
Schumacher, J.	Tripp
Tvedt, L. L.	Mitchell
Weber, J. J.	Dimock
Wurl, Walter	De Smet

Creamery Course.

Name.	Home.
Coburn, C. O.	Park, Kan.
Falkensten, Anton	Groton
Frimoth, Elmer	Tyler, Minn.
Greig, James	Belle Fourche
Jacobson, Fred E.	Des Moines, Ia.
Laude, Harvey L.	Brookings
Madsen, Berg	Grand Forks, N. D.
Meiers, George	Avon
Smith, B. A.	Webster
Spencer, Ray	Highmore
Stephen, Ben	Elgin, Minn.
Thomsen, Peter B.	Superior, Neb.

Steam Engineering Course.

Name.	Home.
Aggergaard, Peter	Irene
Bittner, Walter	Chelsea
Christiansen, Peder Christian	Volin
Davies, Elmer	Cresbard

Doonan, Harry J. ..... Ipswich
Erickson, Oliver ..... Summit
Forsberg, Adolph E. ..... Canova
Geraldson, Emanuel ..... Utica
Graham, Joseph Edgar ..... Coatesville, Ind.
Gurney, Paul ..... Spencer
Johnson, Elmer E. ..... Doland
Johnson, Alfred M. ..... Waubay
Leis, Albert ..... De Smet
Olson, Louis Arthur ..... Chamberlain
Mesney, Morris ..... Volin
Molskness, Philip ..... Colman
Prieheim, Adolph ..... Hurley
Preheim, Thomas J. ..... Marion
Ruml, George ..... Letcher
Schmidt, John ..... Alpena
Schmitger, Harry ..... Mansfield
Stone, Willis C. ..... Cresbard
Sundet, Philip ..... Brookings
Tschetter, Peter S. ..... Freeman
Waltner, Edward J. ..... Marion Jct.

Two Weeks Automobile Course.

Name.	Home.
Bratberg, John	Utica
Brown, Cecil	Brookings
Bushnell, J. H.	Brookings
Bushnell, Edna	Brookings
Cole, B. O.	Alcester
Clark, O. T.	Huron
Costlow, H. W.	Wentworth
Dempewolf, Charles	Harrisburg
Dempewolf, Alvin	Harrisburg
Fix, Henry	Garretson
Fowler, Henry A.	St. Paul, Minn.
Gardner, J. J.	Brookings
Green, Mrs. B. T.	Brookings
Grinell, Ivan	Beresford
Iverson, Alfred	Brandon
Johnson, J. T.	Watertown
Johnson, Helman	Brookings
Johnson, I. L.	Huron
Jackson, M. A.	Egan
Cringen, P. L.	Coleman

Merriman, H. R. ..... Carpenter
McQueen, H. E. ..... Harrold
Nelson, Frank G. ..... Huron
Olson, Bernhardt ..... Utica
Onstine, Wendell L. ..... Flandreau
Sanders, Fred ..... Huron
Solberg, Harry ..... Brookings
Ulstad, Carl ..... Colman
White, Charles A. ..... White Lake

Farm and Home Course.

Men.

Name.	Town.	County.
Alrick, Lewis J.	Brookings	Brookings
Allinson, Herbert M.	Doland	Spink
Averill, Harry	Aurora	Brookings
Bryant, J. F.	Brookings	Brookings
Brooksmith, Wm.	Arlington	Brookings
Baldridge, F. T.	Brookings	Brookings
Breekke, H. H.	Lake Preston	Kingsbury
Blakley, Robt.	Brookings	Brookings
Brown, W. M.	Aurora	Brookings
Brown, G. H.	Brookings	Brookings
Caldwell, W. A.	Brookings	Brookings
Chapman, Claude	Brookings	Brookings
Chicoine, Benjamin	Jefferson	Union
Chambers, George	Aurora	Brookings
Chapman, Geo.	Brookings	Brookings
Crase, W. M.	Brookings	Brookings
Cook, Ed	Bushnell	Brookings
Cook, B. P.	Bushnell	Brookings
Chambers, W. S.	Aurora	Brookings
Christensen, Chris	Brookings	Brookings
Donaldson, W. H.	Brookings	Brookings
Dunton, H. A.	Brookings	Brookings
English, Victor	Brookings	Brookings
Erickson, John M.	Volga	Brookings
Faulkner, F. W.	Brookings	Brookings
Forgard, P. C.	Lake Preston	Kingsbury
Geraldson, Emanuel	Utica	Yankton
Glanzer, Joe E.	Dolton	Turner
Geyer, P. H.	Manchester	Kingsbury
Garrison, G. E.	Aurora	Brookings
Gurney, J. T.	Spencer	McCook

Hammond, F. M.	Brookings	Brookings
Heeren, D. M.	Chancellor	Turner
Halvorson, H. C.	Sinai	Brookings
Hillistad, E.	Volga	Brookings
Haden, Harry	Toronto	Deuel
Helfinstine, Harry	Parker	Turner
Hansen, M.	Elkton	Brookings
Harte, Ed	Brookings	Brookings
Haffdahl, Ben	Sinai	Brookings
Harvey, Clem	Colman	Moody
Hay, J. W.	Revillo	Grant
Hay, W. F.	Revillo	Grant
Johnson, E. H.	Miller	Hand
Johnson, Ray	Brookings	Brookings
Johnston, John	Brookings	Brookings
Johnson, Hennings S.	Egan	Moody
Johnson, Gunder	Castlewood	Hamlin
Jesme, John	Volga	Brookings
Jameson, H. H.	Canova	Miner
Johnson, O. K.	Hetland	Kingsbury
Kendall, A. J.	Brookings	Brookings
Karr, J. W.	Ireton, Iowa	
Karr, M. A.	Brookings	Brookings
King, Jesse	Toronto	Deuel
Keck, J. A.	Brookings	Brookings
Kunkleman, D. J.	Erwin	Kingsbury
Karlstad, H. M.	Brookings	Brookings
Lindsey, James	Brookings	Brookings
Longman, A. C.	Brookings	Brookings
Longman, Wilford	Brookings	Brookings
Larson, L. J.	Brookings	Brookings
Lynch, Chas.	Brookings	Brookings
Lynch, Chris	Brookings	Brookings
Lenocher, J. W.	Bushnell	Brookings
Lewis, Knute	Lake Preston	Kingsbury
McKee, John B.	Wagner	Charles Mix
McMurty, J. C.	Wessington	Beadle
Moen, A. O.	Garretson	Minnehaha
Mueller, Geo. H.	Madison	Lake
Menkveld, Elbert	Bemis	Deuel
Moe, Peter O.	Renner	Minnehaha
McLaurin, John	Hazel	Hamlin
Mitchell, L.	Brookings	Brookings
Miller, Glen E.	Brookings	Brookings
Miller, L. A.	Brookings	Brookings

Mesney, Morris	Volin	Yankton
Magirl, Dennis C.	Woonsocket	Sanborn
Mann, Daniel	Milaca, Minn.	
Matson, James	Lake Preston	Kingsbury
Mitchell, Ora	Bruce	Brookings
McMahon, H. S.	Bruce	Brookings
Norton, J. M.	Aurora	Brookings
Norton, F. D.	Brookings	Brookings
Nicol, John	Wetonka	Brookings
Nielson, F. G.	Carpenter	Clark
Otto, A. W.	Tulare	Spink
Otterness, O. J.	Brookings	Brookings
Ohair, E. B.	Brookings	Brookings
Odland, Rev. L. J.	Clark	Clark
Perley, Geo. A.	Flandreau	Moody
Preheim, Tom J.	Marion	Turner
Preheim, Adolph	Hurley	Turner
Prentice, Zach	Brookings	Brookings
Parker, E. T.	Hazel	Hamlin
Plumb, O. D.	Brookings	Brookings
Preussing, Ernest H.	Hecla	Brown
Plumb, W. E.	Bruce	Brookings
Rider, Leon	Florence	Codington
Rider, Wyman	Florence	Codington
Reppe, Andrew	Brookings	Brookings
Reppe, Clifford	Brookings	Brookings
Reppe, V. M.	Brookings	Brookings
Rilling, Fred	Brookings	Brookings
Rilling, Earl	Brookings	Brookings
Rohl, W. H.	Mobridge	Walworth
Rosburg, W. F.	Ward	Moody
Sutton, Will	Harrisburg	Lincoln
Schultz, Jeppe	Britton	Marshall
Shank, Ray	Aurora	Brookings
Sagness, Gilbert	Sherman	Minnehaha
Sloan, James	Brookings	Brookings
Sloan, John	Brookings	Brookings
Sloan, Will	Brookings	Brookings
Svenson, G.	Ethan	Davison
Supeldt, H. A.	Willow Lake	Clark
Saboe, Chester	Willow Lake	Clark
Schrader, Leon	Aurora	Brookings
Stivers, R. T.	Greene, Iowa.	
Sterud, Ernest	Volga	Brookings
Strunk, Bernard	Irene	Clay

Strunk, John	Irene	Clay
Selix, Sheridan	Brookings	Brookings
Schoenwether, A. J.	Brookings	Brookings
Spurling, Roy	Brookings	Brookings
Sheldon, M. S.	Brookings	Brookings
Smith, Ray	Brookings	Brookings
Smith, L. J.	Brookings	Brookings
Smith, S. E.	Brookings	Brookings
Soren, Pete	Lake Preston	Kingsbury
Tate, Chester	Brookings	Brookings
Tate, K. M.	Brookings	Brookings
Thier, Otto	Willow Lake	Clark
Tekrony, Garrett	Bemis	Deuel
Trulock, Grant R.	Hendrick, Minn.	
Vockrodt, E.	Hazel	Hamlin
Wetterburg, F. C.	Arlington	Brookings
Waltner, Edw. J.	Marion Jct.	Turner
Wick, John	Brookings	Brookings
Wolters, William	Winfred	Lake
Wilcox, W. B.	Brookings	Brookings
White, E. A.	Aurora	Brookings

Women.

Name.	Town.	County.
Atkinson, Mrs. Ella	Brookings	Brookings
Baldridge, Mrs. F. F.	Brookings	Brookings
Bryant, Mrs. Etta C.	Brookings	Brookings
Brooksmith, Mrs. Wm.	Arlington	Brookings
Bryant, Elizabeth	Brookings	Brookings
Butler, Mrs. Thos.	Brookings	Brookings
Bucholz, Mrs. Mary	Brookings	Brookings
Chambers, Mrs. W. S.	Aurora	Brookings
Crase, Mrs. W. M.	Brookings	Brookings
Cornell, Mrs. Sam	Brookings	Brookings
Dunton, Mrs. H. A.	Brookings	Brookings
Giannonatti, Mrs. Peter	Ludlow	Harding
Giannonatti, Elene	Ludlow	Harding
Halvorson, Mrs. H. C.	Sinai	Brookings
Haffdahl, Mrs. Ben	Sinai	Brookings
Hess, Mrs. Vera	Watertown	Codington
Jamison, Mrs. H. H.	Canova	Miner
Lipp, Mrs. C. C.	Brookings	Brookings
Laude, Lizzy	Kingsley, Iowa	
Loomis, Mrs. H.	Brookings	Brookings
McGarry, Mrs. L. M.	Brookings	Brookings

McMahon, Mrs. H. S.	Bruce	Brookings
Ohair, Mrs. E. B.	Brookings	Brookings
Odland, Orva	Clark	Clark
Prowse, Mrs. J.	Brookings	Brookings
Raush, Mrs. Ella	Brookings	Brookings
Reppe, Mrs. A.	Brookings	Brookings
Shordicke, Miss Ivetta	Brookings	Brookings
Sharp, Mrs. D.	Brookings	Brookings
Svenson, Hilda	Ethan	Davison

SUMMARY OF STUDENTS.
1914-1915.

Rank.	Men	Women	Totals	Grand Totals
Collegiate—				
Post Graduate Students	8	...	8	
Seniors	18	8	26	
Juniors	39	17	56	
Sophomores	53	26	79	
Freshmen	80	39	119	
Specials	4	5	9	
Total Collegiate	202	95	297	297
Preparatory—				
Fourth Year	13	6	19	
Third Year	9	12	21	
Second Year	13	6	19	
First Year	13	11	24	
Total Preparatory	48	35	83	83
Music Only	2	5	7	7
School of Agriculture—				
Fourth Year	3	1	4	
Third Year	40	14	54	
Second Year	58	9	67	
First Year	111	30	141	
Total School of Agriculture	212	54	266	266
Short Courses—				
Cream Testers	18	...	18	
Three Months Creamery	12	...	12	
Five Months Engineering	25	...	25	
Automobile Course, 2 weeks	27	2	....	
Farm and Home	142	30	172	
Total Short Courses	224	32	256	256
Summer School	22	165	187	187
Grand Totals	710	387	1096	1096

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